

**Site Inspection
Idol City Mine
Malheur National Forest, Oregon**

Prepared for

U.S. Department of Agriculture–Forest Service
Malheur National Forest
John Day, Oregon 97845

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LIST OF ACRONYMS

ABA	Acid Base Accounting
AMD	Acid Mine Drainage
APA	Abbreviated Preliminary Assessment
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
EA	EA Engineering, Science, and Technology, Inc.
EE/CA	Engineering Evaluation/Cost Analysis
ER-L	Effects Range-Low
ER-M	Effects Range-Medium
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
NOAA	National Oceanic and Atmospheric Administration
NVCS	National Vegetation Classification Standards
NWI	National Wetlands Inventory
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
ONHP	Oregon Natural Heritage Program
ONHIC	Oregon Natural Heritage Information Center
OSC	On-Scene Coordinator
PEL	Probable Effects Level
PRG	Preliminary Remediation Goal
SARA	Superfund Amendments and Reauthorization Act
SC	Status of Critical
SI	Site Inspection
SOC	Species of Concern
SPLP	Synthetic Precipitation Leaching Procedure
SSL	Soil Screening Levels
SV/SU	Status of Vulnerable/Undetermined Status
T&E	Threatened and Endangered
TAL	Target Analyte List
TDL	Target Distance Limit
TDS	Total Dissolved Solids
TEL	Threshold Effects Level
TMS	Timed Meander Search
TOC	Total Organic Carbon
TSS	Total Suspended Solids
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
WRD	Water Resources Department

EXECUTIVE SUMMARY

A site inspection (SI) was performed at the Idol City Mine site, located in the Malheur National Forest, near Burns, Oregon. The SI was performed to determine if wastes at the site pose an immediate or potential threat to human health and the environment, and to collect information to support a decision regarding the need for further action.

This inactive mine site consists of one open shaft and one collapsed inclined shaft, one open adit with a water discharge, numerous caved adits, shafts and prospects, trenches and cuts to the bedrock surface, numerous piles of waste rock and tailings from both underground and placer mining, numerous ponds and ditches created during mining and exploration activities onsite, old buildings and other structures, and miscellaneous equipment. The site is located in Gold Gulch, along an unnamed intermittent stream that flows northward into Trout Creek, also classified as an intermittent stream in this area. The main working area, including most of the structures, the open shaft, and the inclined shaft, is in the northern portion of the site. Additional features extend for almost a mile south along the gulch.

Tasks performed during the SI included background research and file review, onsite and offsite reconnaissance, and collection and analysis of soil, waste, surface water, pore water, sediment, plant tissue, and benthic macroinvertebrate samples. Field activities were performed during July 2003. Results of the SI indicated the following:

- There is evidence of a release of hazardous substances to soil and surface water at the site.
- A number of metals were detected at levels above available screening criteria in surface water and pore water samples collected in the main mining area, as well as in onsite ponds and the adit discharge.
- No evidence of acid mine drainage was observed (at the open adit or in surface water); however, waste rock in many of the piles from underground mining had a soil pH in the range of 3-4.
- Many metals were detected at levels above available screening criteria in surface soil and waste material at the site; many of these metals also exceeded the criteria in a background soil sample. Metals detected in onsite soils at concentrations exceeding both the criteria and background included antimony, arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, selenium, silver, thallium, vanadium, and zinc.
- Several federal or state listed Species of Concern or sensitive species were observed at or near the site and could be impacted by site contaminants, including northern red-legged frog, Oregon spotted frog, pileated woodpecker, and black-backed woodpecker.
- Benthic habitat at the site is severely limited by the small size and intermittent nature of the stream. Because of this, the benthic macroinvertebrate community should not be used as an indicator of the mine's effects on the stream.

Based on the results of the SI, performance of an Engineering Evaluation/Cost Analysis (EE/CA) is recommended at the Idol City Mine site. As part of the EE/CA, a risk assessment should be performed to assess the human and ecological impacts, establish site removal cleanup standards, and evaluate remediation technologies.

1. INTRODUCTION

EA Engineering, Science, and Technology, Inc. (EA) performed a site inspection (SI) for the U.S. Department of Agriculture, Forest Service (Forest Service) at the Idol City Mine site, located in the Malheur National Forest near Burns, Oregon. The work was performed under Contract Number 53-0604-02-33. The SI was performed in general accordance with U.S. Environmental Protection Agency (USEPA) guidance for performing SIs under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The objectives of the SI were to (1) assess the immediate or potential threat that wastes at the site pose to human health and the environment, and (2) to collect information to support a decision regarding the need for further action under CERCLA and the Superfund Amendments and Reauthorization Act (SARA). Potential contaminant sources identified at the abandoned Idol City Mine site included waste rock and discharges from mine adits.

Preliminary findings of an Abbreviated Preliminary Assessment (APA) performed by Cascade Earth Sciences in October 2002 (CES 2002) indicated that waste rock piles associated with mining operations at the site occur within and adjacent to the floodplain of the Gold Gulch drainage. Soil and waste rock sampling indicated that arsenic and lead exceeded USEPA Region 9 Industrial Preliminary Remediation Goals (PRGs) for soil. Based on the limited APA sampling and the proximity of waste rock to the Gold Gulch drainage and Trout Creek, performance of a SI was recommended.

Tasks performed during the SI included background research and file review, onsite and offsite reconnaissance, and collection and analysis of soil, waste, surface water, pore water, sediment, plant tissue, and benthic macroinvertebrate samples. Field work for the SI was performed from 20 to 23 July 2003. The SI was performed in accordance with the project plans, including the Work Plan (EA 2003a), Sampling and Analysis Plan (EA 2003b) and Health and Safety Plan (EA 2003c). These plans were prepared for the Idol City Mine, together with 3 other abandoned mines in the Malheur National Forest. Investigations at the other 3 mines were not completed during the 2003 summer field season due to work restrictions caused by extremely high fire danger. Field methods used at the Idol City Mine site followed the Standard Operating Procedures initially prepared for the site (EA 2003d), except as modified for conformance with work at additional mine sites (EA 2003e). A number of modifications to the sampling locations and techniques were made in the field, based on site observations and field conditions, and with the concurrence of the Forest Service On-Scene Coordinator (OSC). These modifications are documented in Appendix A.

Descriptions of the site, operational history, and wastes generated are provided in Section 2. The results of the SI, along with discussions of the groundwater, surface water, soil, and air exposure pathways, are provided in Section 3. A summary and conclusions are provided in Section 4. The appendixes include a list of deviations from the project plans (Appendix A), site photographs (Appendix B), a General Information Form for the site (Appendix C), copies of supporting information (Appendix D), aquatic and terrestrial investigation tables (Appendix E), a soil sample log (Appendix F), laboratory analytical reports (Appendix G), and survey information and waste pile calculations (Appendix H).

2. SITE DESCRIPTION, OPERATIONAL HISTORY, AND WASTE CHARACTERISTICS

2.1 DESCRIPTION AND LOCATION

The abandoned Idol City Mine site is located approximately 15 mi northeast of the city of Burns, in Harney County, Oregon. It occurs within the Harney Mining District, also known as the Idol City-Trout Creek District, in Malheur National Forest. The site extends from Trout Creek southward approximately 0.8 mi along the Gold Gulch drainage. The location descriptions for the north and south ends of the site are:

- North: Latitude 43.777930186° N, Longitude 118.891650107° W
- South: Latitude 43.767930440° N, Longitude 118.895279259° W
- Township 21 South, Range 32 East, Section 4 SW $\frac{1}{4}$ and Section 9 NW $\frac{1}{4}$.

The site is included on the Devine Ridge North, U.S. Geological Survey (USGS) 7.5-minute topographic map. It is situated between about 5,600 and 5,800 ft in elevation. The site location is indicated on Figure 1.

The Idol City Mine site lies along Forest Service (FS) Road 630. It is accessed from State Highway 395 by going east on FS Road 2820 for approximately 1 mi, continuing east on FS Road 3935 for a little over 3 mi, then heading south on FS Road 600 for approximately 2 $\frac{1}{3}$ mi. At the site, FS Road 630 turns off to the south next to several old wooden buildings. The main mining area occurs approximately 400 ft south of FS Road 600, and is located on a bypass road that runs between FS Road 630 and an unnamed stream and wetland area. The remaining site features extend approximately 0.8 mi to the south along FS Road 630 and within the Gold Gulch valley. The general boundaries of the study area were identified in the field by the OSC.

The site includes a disturbed area of approximately 15 acres on moderate to steep slopes. It is easily accessible to the public. A gate was being installed across FS Road 630, south of the intersection with FS Road 600 and north of the main mining area, during performance of the SI. Based on a conversation with Forest Service personnel at the site, the gate (and a planned cattle guard) was being installed to prevent access by cattle, not by the public.

The site is currently inactive. There are a number of old wooden structures onsite, all in poor condition. The primary mining area occupied approximately 3 acres near the north end of the site; existing features in this area are shown on Figure 2. Figure 3 includes features throughout the site area. Photographs of the site are provided in Appendix B. A General Information Form for the site is included in Appendix C.

Only the larger ponds and excavations are shown on the site figures. Waste piles are located throughout the gulch; most of these presumably are from placer mining and from surface excavations or trenching. In general, sampling activities were focused on areas of apparent or probable underground mining. Samples also were collected from a few piles which either appeared to be from placer mining (for comparison purposes) or which were of uncertain origin. In the following descriptions of site features, an attempt has been made to distinguish between waste pile materials, based on location and visual observations. Soil or waste rock piles may be referred to as resembling surrounding soil (probably from placer mining or trenching) or consisting of lighter-colored material (probably from underground mining).

Volumes of waste piles likely generated during underground mining activities were calculated by Anderson Perry & Associates, Inc., following performance of the site survey. The estimated total volume

of these materials is approximately 2,000 cubic yards. Information on the derivation of this number, and the waste piles included in the calculation, is provided in Appendix. H.

Many of the site features (structures and excavations) are collapsed or in generally poor condition; interpretation of the features is difficult. Information regarding site features was obtained from the following sources:

- Mine Operating Plans obtained from the Malheur National Forest Supervisor's Office
- A Mineral Exam Report prepared in 1968 (Forest Service 1968)
- A report of inspections by Malheur National Forest Minerals Technicians during 2000 and 2001 (Forest Service 2001a and b)
- The APA performed in 2002 (CES 2002).

Numerous claims historically have been made within and adjacent to the Idol City Mine site. One active claim, the Jumping Jack placer claim, exists to the south of the site. Maps showing claim locations are provided in Appendix D.

Site features are listed generally in order of north to south. Features, or nearby groups of features, have been assigned letters; these correspond with the designations on Figures 2 (A through M) and 3 (N through S). The site generally consists of the following:

- A. Bunkhouse (photos 1 and 2) – this is a small building at the north end of the site, located on the former Imperial claim.
- B. Main house (photos 1 and 3) – this is a larger building or cabin near the entrance to the site, located on the former Imperial claim.
- C. Collapsed log structure (photo 4) – this structure is located near the entrance to the site, on the former Imperial claim.
- D. Apparent collapsed adit (photo 5) – this consists of an excavation with a small opening at the eastern end, located on the former Bullion claim.
- E. Trash pit (photo 6) – this is a small excavation filled with old bottles, cans, and other debris. It is located on the former Bullion claim. The 1968 Mineral Exam map indicates the possible presence of a caved tunnel in this area.
- F. Possible fruit cellar (photo 7) – the Forest Service referred to this small wood-framed pit as a fruit cellar because jars were seen on its roof (Forest Service 2001a). It is located on the former Bullion claim.
- G. Head frame (photo 8) – this partially collapsed wooden structure is located on the edge of the wetland area, on and adjacent to several small light-colored waste rock piles. It is located on the former Bullion claim.
- H. Collapsed inclined shaft (photo 8) – this feature was tentatively identified based on photographs and information in the 1968 Mineral Exam Report. At the time of the field work, this feature appeared as a small, water- and debris-filled depression immediately south of the head frame; it is located on the former Bullion claim.

- I. Apparent collapsed adit/excavation (photo 9) – this feature is located on the west side of the gulch and consists of an excavation and several lighter-colored waste rock piles (photo 10) adjacent to and in the gulch. According to the 1968 Mineral Examination Report, this was an open cut at what was previously a short adit. It is located on the former Bullion claim.
- J. Collapsed log structure with open shaft (photos 11 and 12) – this partially collapsed building surrounds a water-filled shaft. Several light-colored piles of waste rock merge into one large pile adjacent to and west of the building, and extending into the wetland area. This feature is located on the former Bullion claim.
- K. Collapsed adit or prospect (photo 13) – this excavation is located immediately north of the log structure with open shaft, and was also on the former Bullion claim.
- L. Old truck with mounted ball mill (photo 14) – the truck is located on the former Bullion claim at the southern end of the main mining area.
- M. Small wooden building – the use of this building is unknown. It is located on the former Bullion claim, just west of the old truck.
- N. Excavations – several excavations occur in this area along with piles that appear to consist of excavated soil. One of the excavations on the east side of the gulch has a small seep (as evidenced by green vegetation but no flow) on the western end. This area appears to occur near the dividing line of the former Bullion No. 2 and Trapper No. 2 claims.
- O. Excavation adjacent to large pond (photo 15) – a small seep (wet but not flowing at the time of the field work) is present at the base of the excavation, flowing toward the large pond. This area appears to be located near the dividing line of the Jumbo No. 3 and No. 4 claims. The 1968 Mineral Exam map indicates the possible presence of a cut and a caved discovery tunnel on the east side of the gulch in this area, and of a caved discovery shaft immediately west of Road 630.
- P. Excavation and possible collapsed adit (photo 16) – a pile of lighter-colored waste rock is present at the western end of the excavation. This excavation, or that designated as “O” may be the “caved discovery tunnel” identified on the 1968 Mineral Exam map. This area may occur within the former Jumbo No. 1 or Jumbo No. 3 claim.
- Q. Excavation and waste rock piles – an excavation with evidence of a small seep was observed in this area. The 1968 Mineral Exam map indicates the possible presence of a caved discovery shaft in this area. Soil or waste rock piles west of the excavation almost completely block the gulch; only a thin cut is present, through which the stream flows (photo 17). The piles in this area appear similar to the surrounding soil; they may consist of overburden from trenching or excavating or may be a result of placer mining. This location appears to be within the former Jumbo No. 1 claim.
- R. Open adit (photo 18) – this adit at the southern end of the study area is partially collapsed. A very low flow of water was observed draining from the adit at the time of the site visit. The adit may be located on the former Pardee claim.
- S. Collapsed building and large waste pile (photo 19) – remnants of a collapsed building are present across Road 630 from the open adit. According to the Forest Service, the building may have been an ore-processing site or a residence (2001). The building appears to have been constructed on top of a large waste rock or tailings pile, which extends down the hillside into the gulch. Some

fine-grained, light tan-colored material was observed at depth in this pile during sampling (photo 20). This area may be located on the former Pardee claim.

In addition to the identified features, several trenches were observed on the hillside on the east side of Gold Gulch and many smaller excavations were observed along Road 630. Miscellaneous equipment and debris (logs, timber, metal, and rusted drums) were observed onsite, primarily in the northern or main working area.

According to the Forest Service (2001b), the State Historic Preservation Office has concurred that the site is eligible for the National Register of Historic Places.

2.2 OPERATIONAL HISTORY AND WASTE CHARACTERISTICS

According to Brooks and Ramp (1968), a small amount of underground mining has been done at Idol City, but most of the gold has come from placer mining in the valley fill. Placer mining in the area reportedly yielded about \$50,000 worth of gold between the time of its discovery in 1891 and 1916 (Brooks and Ramp 1968). More recent activities at the site have included open pit mining in the form of trenches and excavations, as surface soil has been removed to access veins present along the surface of shallow bedrock for geological evaluation and testing (Noranda 1982).

The following history of the site is based primarily on information from the Malheur National Forest Supervisor's Office, File 2810 (Forest Service 2001b):

- 1891 – Placer deposits were discovered in Trout Creek in the Idol City area.
- 1914 – Trout Creek Mining and Milling Company was organized by O.J. Darst, one of the original locators of several claims at the site. The veins explored during this period were reported to contain valuable concentrations of gold, silver, lead, and zinc (Forest Service 1968).
- 1930s – A dredge was moved into the Trout Creek area and a small mill was erected by Trout Creek Mining and Milling Company. There is no known production from the property. The old mill building was reported to be present at the site as late as 1968 (Forest Service 1968); however, its location and current condition are not known.
- NA – The heirs of the estate deeded the property to Mary Riddell Martin, daughter of the late C.W. Riddell. Subsequent operating plans and correspondence were submitted by H.A. Martin, her husband.
- 1968 – Mineral examinations were performed for H.A. Martin at 10 claims and sampling was performed at 3 claims including cuts on Trapper No. 2 and Jumbo No. 3, and the 70-ft inclined shaft on Bullion. The inclined shaft was dewatered before sampling. Cuts or shafts on the other claims were caved, and sampling was not possible.
- 1972 – A Supplemental Mineral Examination was performed for the inclined shaft on the Bullion claim.
- 1975 through 1980, Operating Plans for the site were submitted by H.A. Martin. Planned activities included extending open cuts to expose lode (including a vein crossing the creek), excavating surface materials to reopen caved tunnels, tracing vein structures, opening up and

developing 2 springs near the north line of the Trapper No. 1 claim, testing gravel, performing test drilling on numerous veins and lodes, and prospecting and mill testing.

- 1980 – An Operating Plan was submitted by Lester Rhoads for claims formerly known as Pardee, apparently extending south of the study area. Planned activities included extending an excavation along the creek bed to expose bedrock, examining materials in open cuts and ditches, tunneling 10 ft into a vein, and installing a “gold machine” in the ditch.
- 1981 – An Exploration and Option Agreement was signed between Lester Rhoads, Arnold Dobson, and Donald C. Farley (“optioners”) to Noranda Exploration, Inc. (“optionee”) for 6 claims, apparently extending south of the study area.
- 1981 – An Exploration and Option Agreement was signed between H.A. Martin and Mary R. Martin (“optioners”) to Noranda Exploration, Inc. (“optionee”) for 10 claims including the Imperial, Bullion, Bullion No. 2, Bullion Extension, Trapper No. 1 and 2, Jumbo, and Jumbo No. 2, 3, and 4.
- 1982 – Noranda Explorations, Inc. submitted an Operating Plan describing their intent to excavate a trench (approximately 1,000 ft long) to the bedrock surface for evaluation purposes. The trench was to be backfilled on completion of the evaluation. (The intended area for trenching appears to be near the southern end of the site.)
- 1983 – \$1,000 cash in lieu of bond paid by Noranda Explorations for reclamation of the Idol City project.

Based on Mineral Examination Reports and information from Operating Plans for claims at the site, there were many discovery cuts or shafts and some short adits at one time; most have since collapsed. Some of the older caved tunnels were later reopened by excavation. Veins occur near the bedrock surface in portions of the site, and extensive trenching and excavation of shallow soil has taken place to expose bedrock. Some of these excavations have taken place within the streambed, to expose shallow veins. Much of the trenching work done in more recent years was for evaluation purposes.

While extensive exploration and testing has taken place at the site, it appears that production from lode mining has been minimal. Mineral examination reports have indicated that what mineralization is present is spotty and that the presence of a valuable mineral deposit has not been conclusively shown (Forest Service 1968, 1971).

Wastes generated at the site include waste rock from the mining operations. It is uncertain if any materials were milled on the site. Additional wastes include the remains of former structures and equipment used onsite. No specific information was found regarding mining wastes generated at the site. No documentation was found of past removals or cleanups at the site.

Potential concerns identified by the Forest Service (2001a) in their Site Discovery Form for the Idol City Mine include:

- Drainage from the adit or waste rock
- Discharges to surface water
- Presence of waste rock
- Impacted area located in a floodplain
- Easily accessed by the public

- Potential or known impacts to Threatened and Endangered (T&E) species and/or sensitive environments such as wetlands and streams
- Physical hazards, such as open shafts, adits, and pits
- Dredging or other significant stream channel modifications.

No listings for the Idol City Mine were found by a search of state and federal databases of sites with known or suspected contamination.

3. PATHWAY AND ENVIRONMENTAL HAZARD ASSESSMENT

3.1 GROUNDWATER

3.1.1 Geology

Little site-specific information is available regarding the geology of the Idol City Mine area. The site occurs in the Harney or Idol City-Trout Creek Mining District (Brooks and Ramp 1968); this is a very small district apparently centered near the Idol City Mine site. Few of the formations in the area have been formally named and described, but they generally consist of lavas, tuffs, and alluvium (Forest Service 1968).

The geology of the Harney District is generally described by Brooks and Ramp (1968) as follows:

“..The country rock is a porphyritic andesite of probable late Miocene age. The andesite underlies most of the larger hills in this region and presumably is a part of the Strawberry Volcanics (Brown and Thayer, 1966). Mineralization appears to be confined to a northwest-trending shear zone along which the andesite has been altered or bleached for a distance of at least a mile.”

An inclined shaft was drilled in the main working area, near the northern end of the site. According to the 1968 Mineral Examination Report:

“The inclined shaft on the Bullion claim is 70 feet deep on a 45° slope, and at the bottom a short drift extends 21 feet to the west along a structure that dips 43° to the south. This structure is supposedly the vein followed by the shaft.”

Samples collected in 1968 from within the inclined shaft indicated the presence of localized lenses of quartz with visible heavy sulfides (mainly galena) and relatively high economic values; however, nearby samples from the same vein structure had little economic value. The 1968 Mineral Examination Report and the Supplemental Report of Mineral Examination both concluded that only minor values of ore were present at the site (Forest Service 1968, 1971). According to Operating Plans submitted for claims at the site, a number of small veins run through the site area and some can be traced along the bedrock surface.

Both placer and lode mining have taken place at the Idol City Mine site. In addition, shallow trenches have been excavated in several areas of the site to allow exploration of shallow bedrock. Based on information supplied in Operating Plans for claims at the site, bedrock occurs at a depth of less than 10 ft in portions of the site. Piles of waste rock, tailings, and soil are located throughout Gold Gulch; most of these are from placer mining or shallow excavations and have a coloration and composition similar to the surrounding soils. However, some of the waste rock piles are from lode mining; these typically are much lighter in color.

3.1.2 Hydrogeology

No discussion or documentation of groundwater conditions at the site or in the site vicinity was found. Shallow groundwater discharges as seeps or springs in the site area and flows to the local creeks. During the field investigation, evidence of seeps was observed onsite at several of the larger excavations and possible collapsed adits, although flow was minimal. Groundwater also was discharging (although at a flow so low that it was not measurable) from the open adit at the southern end of the site. Shallow groundwater likely does not form a laterally continuous aquifer in the site area due to the irregular

topography and presence of shallow bedrock. Underground mining in this area reportedly takes place within a shear zone which likely controls groundwater flow to some extent.

During a search for wells in the site vicinity (see section below), the closest well found occurred at the Joaquin Miller Campground, located on the west side of Highway 395, just over 4 mi from the Idol City Mine site. According to Oregon Water Resources Department (WRD) records, this well was installed in 1993 for the Ochoco National Forest. First water reportedly was encountered at a depth of 95 ft during drilling. The well was completed to a depth of 150 ft and the static water level, as measured upon well completion, was 52.6 ft. The reported water levels indicate that the well likely draws water from a deeper, confined or semi-confined aquifer.

No groundwater samples were collected during the SI. However, a water sample was collected from the discharge at the open adit. Because this discharge is more likely to impact surface water quality, analytical results for the sample are discussed with the surface water samples in Section 3.2.5.

3.1.3 Targets

The target distance for groundwater has been defined as a 4-mi radius from the site (Plate 1). Potential receptors include drinking water wells and wellhead protection areas. No records were found of drinking water wells, either public or private, within a 4-mi radius of the site, based on a search of the Oregon WRD database for water wells. There are no wellhead protection areas within a 4-mi radius of the site. Based on the above information, groundwater is not used for drinking within 4 mi of the site.

3.1.4 Groundwater Exposure Pathway Summary

Based on the available information, no release of hazardous substances from the mine to local groundwater systems is suspected. In addition, no evidence was found of the use of groundwater for drinking water within the target area. Therefore, the groundwater pathway appears to be incomplete. Groundwater that discharges from the adit(s) may impact nearby surface water bodies; these sources are discussed in the following section.

3.2 SURFACE WATER

3.2.1 Hydrologic Setting

The site occurs near the headwaters of Trout Creek, a tributary of Silvies River. An unnamed intermittent stream flows through Gold Gulch, along and through the Idol City Mine site. The stream flows generally northward and discharges into Trout Creek at the northern end of the site. Based on information from National Wetlands Inventory (NWI) maps, Trout Creek is characterized as an intermittent stream in the vicinity of the site, but as a perennial stream approximately 5 mi downstream of the Idol City Mine site.

According to USGS maps, the Gold Gulch watershed covers an area of less than 1 square mile. All of the site area occurs within this watershed. The unnamed stream in Gold Gulch originates a short distance south of the Idol City Mine site. It is fed by several springs and seeps upstream of the mine area. Pardee Spring, located northwest of the southern end of the Idol City Mine site, is one of the larger springs; it feeds into the stream in Gold Gulch near the center of the site (Figure 3). At the time of the SI field work, minimal flow was evident in some areas of the stream, but the streambed was dry in others. The average width of the stream in Gold Gulch was very narrow, at approximately 8-18 in. The average depth was only 2-4 in. in areas that contained water.

Several ponds of varying sizes are located along the Gold Gulch drainage. These were likely excavated during placer mining or trenching in the gulch. Piles of waste materials, from both placer and lode mining, are spread throughout the gulch. In one area, the piles extend almost completely across the gulch and have only a narrow cut allowing the stream to flow through (photo 17). Surface water and sediment samples were collected from 2 of the ponds for field and laboratory analyses. These included a large pond (sampling station 13, approximately 2-6 ft deep) near the center of the site area, and a small pond (sampling station 14, approximately 1 ft deep) further downstream, near the main working area. A large emergent wetland area surrounded the second pond; stream flow was not measurable in this area at stream station 05.

In the southern part of the site, the topography is fairly steep and the Gold Gulch stream flows along a narrow path down the hillside. The topography flattens out near the main mining area, at the north end of the site. In this area, the stream has a broad floodplain containing emergent wetland vegetation. The stream did not have a well-defined course directly upstream of and at the confluence with Trout Creek. The stream course appears to have been altered by mining activities throughout most or all of the site area and is dispersed by the wetland area leading into Trout Creek.

Water discharges from the open adit on the western slope of the gulch, at the southern end of the site. At the time of the SI field work, this discharge volume was very small (flow was not measurable) and the water was observed to flow down FS Road 630 for a short distance before it infiltrated the ground. At several other excavations or possible collapsed adits, evidence of drainage was observed, although the flow was minimal to nonexistent at the time of the field work.

Two locations along the unnamed stream in Gold Gulch and 1 location on Trout Creek were selected for sampling based on conversations with the OSC (Figure 1). The locations, from upstream to downstream, were as follows:

- The reference sampling station (Station 07) was located in the Gold Gulch stream, approximately 75 ft upstream of the southern (open) adit. Although this location is upstream of the Idol City Mine, it is downstream of several mining claims and at least 1 active claim (Jumping Jack placer mine). There were no unimpacted areas to use for reference. The stream at Station 07 flowed within a defined channel; however, the flow was minimal at the time of sampling. The current velocity was measured at 0.03 ft per second. Stream depth at this station averaged 4 in. and the width of the channel was 8 in. Exposed substrate indicated that increased flow volume must occur at other times of the year. Macroinvertebrate habitat was severely limited during the sampling event due to the lack of water in the stream.
- Station 05 was located adjacent to the main working area, in the northern portion of the site. While a very shallow and narrow stream channel existed at this location, evident by the existence of stream substrate within the channel, flowing water was non-existent. The stream width was approximately 8 in. Water sampling was conducted by creating a depression in the substrate and allowing it to fill with water. Macroinvertebrate sampling was conducted by hand picking organisms from the substrate.
- Station 06 was located approximately 300 ft downstream of the mine, on Trout Creek. Placer mining has historically taken place along this section of Trout Creek, as it has along much of the creek bed. During sampling, the creek had a depth of approximately 6 in. and a width of approximately 18 in. Water filled the channel at this location, but flow was not measurable. Substrate within the stream channel was similar to that found in Gold Gulch, mostly consisting of gravel, sand and silt. Macroinvertebrate sampling was conducted by kick netting and sweeping the disturbed fauna into the net by hand.

3.2.2 Targets

A target distance of 15 mi downstream has been identified for the surface water pathway. Potential targets include surface water intakes supplying drinking water, sensitive environments (i.e., wetlands), fisheries, and aquatic species of concern. The 15-mi target distance limit (TDL) is shown on Plate 2. The TDL extends approximately 12 mi along Trout Creek in a generally northwesterly direction, from its confluence with the Gold Gulch stream (at the northern end of the site) to the point where it discharges into the Silvies River. Approximately 3 mi of the Silvies River, downstream of the confluence with Trout Creek, are also included in the TDL.

Records obtained from the Oregon WRD indicate that there are no surface water intakes within the 15 mi downstream reach. According to the Forest Service, there are no designated, developed campsites within the TDL, however there are likely numerous dispersed campsites located along roads paralleling both Trout Creek and the Silvies River. A dispersed campsite is an unauthorized one developed by the user, is typically located next to an open road, and often consists of a parking spot and a fire ring. Such a campsite was observed in use by the EA field team on Trout Creek approximately 1.5 mi downstream of the site. Campers using this type of campsite, along with the occasional miner working a claim, may withdraw drinking water on an individual basis from streams within the TDL.

Prior to conducting the fieldwork, the following activities were performed to obtain background information:

- A list of Threatened and Endangered (T&E) species and Species of Concern (SOC) for Malheur National Forest, Harney County, and the Blue Mountain Ecoregion was generated based on information obtained from the Oregon Natural Heritage Program (ONHP 2001).
- Habitat information from *Flora of the Pacific Northwest* (Hitchcock and Cronquist 1973) was used to identify plant species that could potentially occur at the Idol City Mine site and to refine the list generated from the Malheur National Forest.
- The Oregon Natural Heritage Information Center (ONHIC) was contacted regarding any recorded observations of botanical or wildlife T&E species and SOC at or near the Idol City Mine site; there were no recorded observations within a 2-mi radius (the available search range) of the site (ONHIC 2003).
- Onsite wetlands were identified using the NWI 7.5 minute topographic map for Devine Ridge North (NWI 1994).

Lists of sensitive plants in Malheur National Forest and listed wildlife species in the Blue Mountain Ecoregion of Harney County are provided in Appendix E.

Habitat reconnaissance surveys were conducted at the Idol City Mine site along Gold Gulch, between the confluence with Trout Creek and approximately 1 mi south, on 21 and 22 July 2003. The surveys were performed to determine the existing habitat conditions, species composition, the presence of wetlands and other water features, and if T&E species or SOC currently exist at the site or background stations. One terrestrial background station was located offsite of the disturbed Idol City Mine site and 1 downstream station was located along Trout Creek. The habitat was characterized through documentation of dominant plant species observed (including canopy and understory species), aquatic resources present, habitat conditions observed, and photographic notes. The National Vegetation Classification Standards (NVCS) were used to consistently characterize the vegetation types.

Wetland area information was obtained by comparing information from NWI maps to field observations and the definitions of a wetland as defined by CERCLA (40 CFR 230.3). There are no wetlands mapped by the NWI onsite, including the intermittent streams in Gold Gulch and Trout Creek. However, of the 15-mi TDL, approximately 11 mi of Trout Creek is mapped either as a riverine wetland itself, or bordered by palustrine wetlands. Although not mapped by NWI, 3 palustrine emergent (PEM1) wetlands were observed and identified onsite in the field. The identified wetlands are the result of and supported by the creek in Gold Gulch; the water collects just south of the confluence with Trout Creek. Standing water, anoxic soil conditions, and aquatic and emergent obligate wetland vegetation were observed in these areas, supporting the CERCLA definition of a wetland. Aquatic vegetation observed within the wetlands included white water buttercup and American speedwell, both obligate, hydrophytic vegetation. Additional hydrophytes observed included creeping spikerush, bur-reed grass (*Sparganium emersum*), and various rush (*Juncus* spp.) and sedge (*Carex* spp.) species.

The ONHP database search identified two species of fish (Malheur mottled sculpin and bull trout) that occur in the high elevations of Harney County and could occur in the site area; however, no fish were observed during the sampling effort. According to an Oregon Fisheries Biologist, a light to moderate level of recreational fishing takes place in downstream portions of Trout Creek and in the Silvies River within the 15-mi reach. Fish caught in these areas typically include redband trout in Trout Creek and smallmouth bass, bluegill and perch in the Silvies River.

Four species of amphibians and reptiles were found in the ONHP database, but the high elevation of the mining sites eliminates most of these species except 2; Columbia spotted frog and western rattlesnake (see Appendix E). However, 2 additional amphibians not listed for Harney County but listed in other Oregon counties were found in the large pond at the site (near sampling station PD-13):

- Northern red-legged frog (*Rana aurora*) tadpoles – this species has a Federal Status of Species of Concern (SOC) and an Oregon Department of Fish and Wildlife (ODFW) Status of Vulnerable/Undetermined Status (SV/SU).
- Oregon spotted frog (*Rana pretiosus*) adults – this species has a Federal Status of Candidate (C) and an ODFW Status of Critical (SC).

Additional reptiles and amphibians collected at the large pond included garter snake (*Thamnophis sirtalis*), Pacific tree frog (*Hyla regilla*) tadpoles and adults, and rough-skinned newt (*Taricha granulosa*) larvae. The large pond where these species were collected provides water resources and high-quality habitat for aquatic vertebrates and invertebrates in a predominantly dry, arid region. At least 5 species of aquatic vegetation (white water buttercup, American speedwell, duckweed, water-starwort, and creeping spikerush) were observed at the pond. The large size of the pond and the diversity of aquatic vegetation provide an ideal habitat for amphibian and reptile species. It is unlikely that other water resources in the immediate area (including the smaller pond sampled) could support the observed, or additional, listed amphibian species.

3.2.3 Aquatic Survey Results

Aquatic surveys were conducted to assess the impact, if any, of the Idol City Mine site on the benthic macroinvertebrate community, presence of fish species, and habitat parameters. Most notable at the site was the limited habitat to support a healthy benthic macroinvertebrate or fish community. The intermittent nature of the stream severely limits the abundance and composition of the benthic macroinvertebrate community. Only taxa specifically adapted to this type of system would be expected to

compose a major percentage of the community. It was also apparent that the lack of water and limited habitat prevent the existence of a permanent fish community.

No fish species were collected or observed in the Gold Gulch stream, Trout Creek, or the 2 ponds sampled at the Idol City Mine site. At the time of sampling, the intermittent streams were both too small and shallow to support any type of fish species; therefore seining was not conducted. Due to the limited size and sometimes absence of free-flowing water at the stream locations, kick-netting to collect benthic samples could not be conducted in accordance with Oregon Department of Environmental Quality (ODEQ) methods at any of the stream stations. However, invertebrate species were collected by a combination of modified kick netting and handpicking of organisms from substrate material in the channel at the stream sites. Benthic macroinvertebrates were collected by these modified techniques in an effort to get some kind of qualitative view of the community at the site. These techniques provided the only available method to observe the community composition at the site, rather than eliminating the collection of macroinvertebrate data all together. Macroinvertebrates were also collected from the large pond sampled (Station 13), using the net to collect benthic samples from the available sediment and aquatic vegetation.

Laboratory sorting of benthic macroinvertebrate samples was conducted in accordance with ODEQ methods and evaluated using a multi-metric analysis, Level 3 Assessment (ODEQ 2001). However, since the field collection methods could not be performed using the ODEQ methods, the metrics were calculated, but scores were not assigned to the metric values or total scores calculated. The metric information is provided to facilitate basic comparisons among the sites without attempting to attach any significance to the results (i.e., compare them to regional or state data). Tables listing the number and relative abundance of the taxa collected, as well a summary of Level 3 metrics, are provided in Appendix E.

Three orders of insects, Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies), collectively referred to as EPT, are considered to be the most sensitive or responsive to impairment within the system. Therefore, EPT richness or abundance is included in the multi-metric analysis. While EPT taxa were present at the site, 2 of the stream stations (Stations 06 and 07) were dominated by midges (Tanytarsini). Midges, in general, are a tolerant order of insects, and often predominate at sites with limited or marginal habitat. However, the area in general exhibits a decent diversity of taxa as well as a fairly low percentage of tolerant taxa, which indicates that if the site were **not** habitat limited, a healthy benthic macroinvertebrate community could exist. None of the areas sampled appeared to be impaired by effects from the site, but the macroinvertebrate community is certainly habitat limited.

Of the 3 stream sites sampled, Station 05 produced the least abundance and richness of taxa; this would be expected since this station was the most severely limited by its habitat. The station consisted of no free-flowing or standing water and was only wet when substrate material was flipped over and removed. Following is a summary of the general findings of the macroinvertebrate sampling:

- Gold Gulch and Trout Creek (in the site area) are intermittent streams.
- The streams are not biologically dead as evidenced by the existing benthic macroinvertebrate community.
- The area is probably supporting the best community the limited habitat will allow.
- The limited habitat is driving the benthic macroinvertebrate community at this site. Therefore, the community should not be used as an indicator of the mine's effects on the stream.

Habitat was evaluated at each of the 3 stream stations, in accordance with the methods stated in the project plans; habitat scores are presented in Appendix E. As mentioned previously, habitat to support aquatic organisms is severely limited at this site. All 3 sites rank as marginal habitat using the USEPA Rapid Bioassessment Protocol (RBP; Barbour 1999).

3.2.4 Previous Investigations

Four surface water samples were collected at the site during performance of an APA in October 2002 (CES 2002). The samples were analyzed *in situ* using a Horiba U-22 meter. Samples were collected from the open shaft, a trench south of the shaft, “Adit 1” (the southernmost or open adit), and “Adit 4” (an apparent collapsed adit on the east side of the drainage). Sample analyses and results were as follows:

Location	pH	Specific Conductance (uS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/L)	Temperature (° Celsius)	Total Dissolved Solids (mg/L)	Redox Potential (millivolts)
Shaft	7.84	0.505	87.4	2.86	5.68	320	57
Trench	8.8	0.964	438	7.83	1.64	630	16
Adit 1	7.7	1.08	101	2.75	5.69	700	-12
Adit 4*	8.02	0.782	NA	3.51	4.79	500	120

NOTE: uS/cm = Microsiemens per centimeter.
 NTUs = Nephelometric turbidity units.
 mg/L = Milligrams per liter.
 NA = Instrument was not working properly.
 * No deep pools of seep water were available for this reading: this may affect some results.

3.2.5 Analytical Results

Locations of stream and pond samples collected during the SI are indicated on Figures 1 and 2. Photographs of selected sample locations are provided in Appendix B. Analytical results for surface water, pore water, and sediment samples are presented in Tables 1, 2, and 3, respectively. Only those constituents detected in 1 or more samples are included in the summary tables. Dissolved metals concentrations were used for comparison with surface water screening criteria, and are included in Tables 1 and 2. Total metals concentrations for surface water samples are presented in a summary table in Appendix G, along with copies of the laboratory reports.

Six surface water samples, 3 pore water samples, and 6 sediment samples were collected during the SI including the following:

- Three stream surface water samples
- Two pond surface water samples
- One adit surface water sample
- Three stream pore water samples
- Three stream sediment samples
- Two pond sediment samples
- One adit sediment sample.

Field analyses performed on surface water and pore water samples included temperature, pH, dissolved oxygen, specific conductance, turbidity, and redox potential. Laboratory analyses performed included the following:

- Surface water – pH, Target Analyte List (TAL) metals (total and dissolved), cyanide, total dissolved solids (TDS), total suspended solids (TSS), organic and inorganic), hardness, alkalinity, specific conductance, redox potential (Eh), and sulfate
- Pore water – pH, dissolved TAL metals, cyanide, TDS, hardness, alkalinity, specific conductance, Eh, and sulfate
- Sediment – TAL metals, cyanide, total organic carbon (TOC), and grain size.

Field water quality measurements were obtained in water samples collected at each stream station and from the ponds. Field water quality measurements are presented in Tables 1 (surface water) and 2 (pore water). Trends observed include the following:

- All pH measurements fell between 6.8 and 7.8, including the water sample from the adit. No evidence of acid mine drainage (AMD) was observed.
- Specific conductivity was high at the open adit, but measurements did not vary widely among the other samples (from streams and ponds).
- Dissolved oxygen measurements were below 6 mg/L in samples collected at the open adit (1.33 mg/L), Station 05 (5.48 mg/L) and Station 06 (3.44 mg/L). The low measurements obtained in the two stream samples likely were due to the stagnant nature of the sampled water.

Criteria for comparing measured concentrations of metals in surface water and pore water consist of the following human health and ecological screening values:

- ODEQ Water Quality Criteria, Protection of Aquatic Life, Fresh Chronic Criteria (Oregon Administrative Rules [OAR] 340-041-001); hardness-dependent values (cadmium, copper, lead, nickel, silver, and zinc) were calculated based on the hardness for each sample, and the range of values is provided in the data tables.
- ODEQ Water Quality Criteria, Protection of Human Health, Water, and Fish Ingestion (OAR 340-041-001).
- ODEQ (1998) Guidance for Ecological Risk Assessment, Level II Screening Values for surface water; these values are based on previous USEPA water quality criteria that have been superseded by the USEPA (2002) recommendations for ambient water quality criteria for freshwater organisms.
- USEPA (2002) recommended ambient water quality criteria for freshwater aquatic organisms, chronic; hardness-dependent values were calculated separately for each sample.
- USEPA (2002) recommended ambient water quality criteria for freshwater aquatic organisms, Tier II secondary chronic values calculated by Oak Ridge National Laboratory (Suter & Tsao 1996).
- USEPA (2002) recommended ambient water quality criteria for protection of human consumption of fish; hardness-dependent values were calculated separately for each sample.
- Oak Ridge National Laboratory, U.S. Department of Energy (Efromyson, et. al. 1997), PRGs.

Of these screening values, comparisons were made with the lowest value available. Criteria for comparing measured concentrations of metals in sediments consist of the following values:

- Threshold Effects Level (TEL) and Probable Effects Level (PEL) from USEPA National Sediment Quality Survey, Screening Values for Chemicals Evaluated (http://www.epa.gov/waterscience/cs/vol1/appdx_d.pdf).
- Effects Range-Low (ER-L) and Effects Range-Medium (ER-M), National Oceanic and Atmospheric Administration (NOAA), from USEPA (1997) National Sediment Quality Survey, Screening Values for Chemicals Evaluated.
- ODEQ (1998) Guidance for Ecological Risk Assessment, Level II Screening Values for freshwater sediment.

Results of the metals analyses for surface water, pore water, and sediment samples are provided in Tables 1, 2 and 3, respectively, and are discussed in the following table.

Summary of Surface Water, Pore Water, and Sediment Sample Metals Data

Sample Type	Table/ Sample No.	Dissolved Metals Exceeding One or More Comparison Criteria	Trends Observed and Comments
Surface Water	Table 1		
Upstream	(SFW-07)	Barium only	Except for barium, the metals of concern were detected at higher concentrations in the sample collected adjacent to the main working area (SFW-05).
At the mine	(SFW-05)	Arsenic, barium, cadmium, lead, manganese, and zinc	
Downstream	(SFW-06)	Barium only	
Big Pond	(SFW-13)	Arsenic, barium, and manganese	Arsenic and manganese were detected at higher concentrations in the big pond.
Small Pond	(SFW-14)	Barium only	
Adit Discharge	(SFW-12)	Arsenic, barium, calcium, iron, and manganese	All metals of concern, except barium, were detected at the highest concentrations in surface water collected at the adit.
Pore Water	Table 2		
Upstream	(PW-07)	Barium only	Sample PW-05 had the highest concentrations of aluminum, cadmium, lead, and zinc, while sample PW-06 had the highest concentrations of barium, iron, and manganese.
At the mine	(PW-05)	Aluminum, barium, cadmium, lead, and zinc	
Downstream	(PW-06)	Barium, iron, and manganese	
Sediment	Table 3		
Upstream	(PSD-07)	Arsenic, copper, and mercury	Concentrations of most of the metals exceeding criteria were highest in the samples collected from the stream adjacent to the main working area (SSD-05) and from the small pond (SSD-14) in the same area.
At the mine	(SSD-05)	Antimony, arsenic, cadmium, copper, lead, mercury, nickel, silver, and zinc	
Downstream	(SSD-06)	Arsenic, copper, and mercury	
Big Pond	(PSD-13)	Arsenic, copper, and mercury	
Small Pond	(SSD-14)	Antimony, arsenic, cadmium, copper, lead, mercury, nickel, silver, and zinc	
Adit	(PSD-12)	Antimony, arsenic, copper, manganese, and mercury	Arsenic, antimony, and manganese concentrations were highest in the sample collected at the adit.

In sediment samples, the percentage of fine material (clay and silt) was higher in the 2 pond samples and in the sample collected at the adit. Sample SSD-14, collected from the small pond near the main mining area, was composed of 94 percent fines. Sediments collected from the streambed were coarser and were composed primarily of gravel.

3.2.6 Surface Water Exposure Pathway Summary

There is evidence of an ongoing release of chemicals to surface water from the Idol City Mine site. Only barium was detected at a concentration exceeding the comparison criteria in upstream and downstream surface water samples. In the surface water sample collected in the main mining area, additional metals detected at concentrations above the criteria included arsenic, cadmium, lead, manganese, and zinc. Sediment samples with the most exceedences of comparison criteria included those collected at the open adit, and from the stream and pond sampling stations in the main working area.

No evidence of AMD was observed and all stream and pond samples had neutral pHs. Benthic habitat was severely limited due to the small size and limited flow of the streams; no clear impacts from the mining activities could be determined.

The lack of water and limited habitat in the streams prevented the existence of a fish community on or adjacent to the site; however, fish occur downstream of the site within the 15-mi TDL. Two listed species of amphibians were observed in a pond at the site; the Northern red-legged frog and the Oregon spotted frog.

3.3 SOIL

3.3.1 Targets

There are no onsite workers and no people who live onsite or within 200 ft of areas of suspected contamination related to the site. A small, windowless wooden building is present a little over 200 ft from the site, on the north side of FS Road 600, on a privately owned parcel. The use of this structure is unknown. The closest regularly occupied building appears to be at least 3 mi from the site. It is estimated that less than 10 people live within a 4 mi radius of the site.

The Idol City Mine site is open to public access. A warning sign citing potential site hazards is present at the north end of the site, near the main building. Because the mine area is adjacent to a Forest Service Road, the site has road traffic including all-terrain vehicles. Land uses in the site area include recreation (hiking, hunting, camping, etc.), cattle grazing, and mining on nearby claims.

According to NWI maps, approximately 200 acres of wetlands occur within a 4-mi radius of the site. This corresponds to approximately 8 percent of the 4-mi radius consisting of wetlands. They occur either in the pockets of hollows or other low-lying areas, or along streams and other surface water bodies. The closest wetland is located approximately ¼ mi west of the site in a low-lying area. The types of mapped wetlands (identified within the 4-mi radius) corresponding to a CERCLA wetland consist of:

- PEMA, B, and C - Palustrine Emergent Temporarily Flooded/Saturated/Seasonally Flooded
- PSSB and C - Palustrine Scrub/Shrub, Saturated/Seasonally Flooded
- PFOB - Palustrine Forested, Saturated
- R4SBA and C - Riverine Intermittent Streambed, Temporarily/Seasonally Flooded (if emergent vegetation is present).

Plant and Wildlife Surveys

Lists of T&E species, SOC, and sensitive species were generated and refined prior to conducting the fieldwork, as described in Section 3.2.2. Lists of sensitive plants in Malheur National Forest and listed wildlife species in the Blue Mountain Ecoregion of Harney County are included in Appendix E. The ONHIC search provided no records of observations of botanical or wildlife T&E species or SOC within a 2-mi radius of the site.

Habitat reconnaissance surveys were conducted in the site area to establish existing habitat conditions, species composition, and the presence of wetlands and T&E species. Reconnaissance-grade informal wildlife surveys were conducted at the site in conjunction with other field activities and sampling. In addition, the timed meander search (TMS) procedure was used to conduct botanical examination of distinct habitat types using an approach established by Goff (1982) to determine the presence of T&E species and SOC. The approach is a semi-quantitative procedure that documents the level of effort at each station as well as in the discrete habitat types.

Vegetation

The area including and surrounding the mine site contained both scattered and dense scrub, and herbaceous vegetation in the disturbed, open areas and waste piles. Sparse, scrub vegetation was observed growing on the waste and rock piles. Canopy and understory species were dispersed throughout the disturbed area, but predominantly along the edges of the site in the steep adjacent hillsides. The dominant scrub vegetation onsite included squaw current (*Ribes cereum*), snowberry (*Symphoricarpos albus*), sagebrush species (*Artemisia* spp.), immature Douglas fir and ponderosa pine. Herbaceous vegetation observed onsite included lupine (*Lupinus sericeus*), cinquefoil (*Potentilla gracilis*), and Western yarrow (*Achillea millefolium* var. *lanulosa*). A list of plant species observed onsite is included in Appendix E.

Some plant species observed on the waste piles and at the southern (open) adit, including squaw currant and silky lupine, appeared stressed. Visual stress indicators in this vegetation included yellow leaves with green veins (could indicate toxicity or lack of nutrients), leaves with brown tips (could indicate burning), and stunted growth (compared to background areas). The visual lack of vegetation in the disturbed portion of the site, including the waste and rock piles, can most likely be attributed to steep slopes and the lack of organic matter and nutrients on waste and rock.

Three distinct habitat types were observed in the site area:

- Coniferous hillsides – onsite
- Emergent wetland areas – onsite surrounding Gold Gulch
- Evergreen shrubland – offsite, but observed from the mine area

The coniferous hillsides had moderate east- and west-facing slopes with a dry, rocky open understory and a canopy co-dominated by Douglas fir (*Pseudotsuga menziesii*) and ponderosa pine (*Pinus ponderosa*). This area could be classified as a temperate or subpolar needle-leaved evergreen forest (I.A.8.N) based upon NVCS. The surrounding, moderately steep and dry, rocky hillsides adjacent to the site were co-dominated by the canopy species Douglas fir and ponderosa pine, and sub-dominated by Western juniper (*Juniperus occidentalis*). The mature conifers were approximately 100 ft tall with an average diameter at breast height (DBH) of 36 in. The understory was open with little vegetation and included the species yellow hawkweed (*Hieracium albertinum*), western meadow rue (*Thalictrum occidentale*), and sedge species (*Carex* spp.). Some downed trees and snags were observed in the coniferous forest.

The stream in Gold Gulch is intermittent and less than a foot wide in the areas where stream samples were collected. The areas immediately surrounding the intermittent stream were characterized as emergent wetlands with scattered Pacific willows (*Salix lasiandra*). Based upon the NVCS, these areas could be characterized as semi-permanently flooded temperate perennial forb vegetation (V.B.2.N.e). Further upstream along Gold Gulch south of the mine site, scattered evergreens and Pacific willow provided a more substantial riparian canopy to the stream. The wetland areas were dominated by the aquatic vegetation white water buttercup (*Ranunculus aquatilis*) and American speedwell (*Veronica Americana*); emergent vegetation included creeping spikerush (*Eleocharis palustris*) and various rush (*Juncus* spp.) and sedge species (*Carex* spp.). Other aquatic vegetation that was observed only in the large pond included duckweed (*Lemna minor*) and a water-starwort species (*Callitriche* sp.), which was not flowering at the time and therefore could not be identified to the species level. Both species are classified as obligate wetland vegetation.

Offsite of the mine area, directly to the north (across FS Road 600), a steeply-sloped evergreen shrubland (III.A.4.N.a) dominated by sagebrush (*Artemisia* sp.) and sub-dominated by kinnikinnick (*Arctostaphylos uva-ursi*) was observed.

Wildlife

The wetland vegetation and ponds surrounding Gold Gulch and the confluence with Trout Creek represent a unique habitat compared to the surrounding dry, arid regions. Many wildlife species, predominantly avian species, were observed at the site and in the vicinity of the mine, most likely taking advantage of the water resources at the site (see list in Appendix E).

Numerous least chipmunks (*Eutamias minimus*) and golden-mantled squirrels (*Citellus lateralis*) were observed at the site in the understory of the coniferous habitat. Mule deer (*Odocoileus hemionus*) were observed both on and offsite. A coyote (*Canis latrans*) was observed offsite and the OSC reported observing a badger near the site. Nine species of bats are listed for Harney County, but only 6 of the 9 species might use mine sites for roosting. During the terrestrial surveys, no visual or olfactory evidence of bats was observed onsite or at the open (southern) adit. However, it is possible that the Idol City Mine site may provide habitat suitable for bat species.

Many avian species were observed during an early morning site reconnaissance, when little anthropogenic or other disturbing activities were taking place. Avian species commonly observed using the disturbed scrub vegetation of the site and adjacent conifers included brown creeper (*Certhia americana*), dark-eyed junco (*Junco hyemalis*), Clark's nutcracker (*Nucifraga columbiana*), black-capped chickadee (*Parus atricapillus*), black-headed grosbeak (*Pheucticus melanocephalus*), green-tailed and spotted towhees (*Pipilo chlorurus* and *P. maculatus*), red-breasted and white-breasted nuthatches (*Sitta canadensis* and *S. carolinensis*), red-naped sapsucker (*Sphyrapicus nuchalis*), and white-crowned sparrow (*Zonotrichia leucophrys*). Other common species included American goldfinch (*Carduelis tristis*), common raven (*Corvus corax*), Steller's jay (*Cyanocitta stelleri*), and American robin (*Turdus migratorius*). The OSC also reported observing several wild turkeys (*Meleagris gallapavo*) onsite one morning. A prairie falcon (*Falco mexicanus*) was observed flying over the site and not necessarily using the habitat. In the surrounding coniferous habitat 3 species of woodpeckers were observed, including pileated (*Dryocopus pileatus*), black-backed, and hairy woodpeckers (*Picoides arcticus* and *P. villosus*). Two of these are listed as state sensitive species:

- Pileated woodpecker – ODFW Status of SV
- Black-backed woodpecker – ODFW Status of SC

The dead snags and open understory of the coniferous forest provide good quality habitat for woodpecker species at the site and surrounding areas. During the water quality collection effort at the upstream sampling station, a large and unidentifiable hawk species, possibly a Northern goshawk, was observed using the wetland areas. The Northern goshawk has a federal status of SOC.

The physical disturbance of the mine site area appears to have affected the quality of habitat available to potential wildlife species; however, additional and undisturbed habitat is available in the areas immediately surrounding the mine site. A complete list of wildlife species observed at the site during the site reconnaissance is included in Appendix E.

3.3.2 Previous Investigations

Shallow soil and waste samples (approximately 4-6 in deep) were collected from waste rock piles at the site during performance of an APA in October 2002 (CES 2002). The samples were analyzed for metals content using a Niton Dual Source X-ray fluorescent unit and *in situ* field screening methods. Metals concentrations detected in 9 samples were compared to 2002 USEPA Region 9 PRGs for industrial soils. Arsenic and lead were detected at concentrations exceeding the PRGs in multiple samples. Specific sampling locations were not identified in the report. Samples with arsenic or lead concentrations exceeding the PRGs included the following:

Location	Constituent	Result (mg/kg)	PRG (mg/kg)
Waste rock pile 1 (north of shaft)	Arsenic	305	1.6*
	Lead	1,780	750
Waste rock pile 3 (at shaft)	Arsenic	562	1.6*
	Lead	1,630	750
Waste rock pile 6 (west of shaft, across Gold Gulch drainage)	Arsenic	170	1.6*
Waste rock pile 8 (east of 2 buildings near Trout Creek)	Arsenic	91	1.6*
Waste rock pile 9 (near Adit 1)	Arsenic	83	1.6*
Waste rock pile 9 (near Adit 1)	Arsenic	488	1.6*
Waste rock pile 10 (near Adit 4)	Arsenic	217	1.6*
* For cancer endpoint, the PRG for arsenic was 1.6 mg/kg; for noncancer endpoint it was 260 mg/kg. (These concentrations are revised annually.)			
NOTE: PRG = Preliminary Remediation Goal. mg/kg = Milligrams per kilogram.			

Based on their assessment, CES suggested that waste material may be impacting the Gold Gulch stream and Trout Creek, and recommended performance of an SI.

3.3.3 Analytical Results

The following soil, waste, and associated plant tissue samples were collected during the SI:

- Twelve surface soil/waste samples, including 1 background sample
- Five subsurface soil samples
- Four plant tissue samples: 3 co-located with onsite soil samples and 1 co-located with the background soil sample.

Sample locations are indicated on Figures 2 and 3. A soil sample log, including sample descriptions, is provided in appendix F.

Soil and Waste Samples

Samples labeled “TA” were collected from onsite soil in potentially impacted areas, and from soil piles suspected to be from placer mining or surface excavations. Samples labeled “WP” were collected from piles suspected to be waste rock from underground mining. Surface soil samples generally were collected from the 4 to 6 in. depth interval.

In general, soil samples were analyzed for pH, TAL metals, and cyanide. Approximately 25 percent of the soil samples were also analyzed for Synthetic Precipitation Leaching Procedure (SPLP) metals and Acid Base Accounting (ABA). Analytical results for soil and plant tissue samples are presented in Tables 4 and 5, respectively. ABA results are summarized in a table in Appendix G.

Criteria for comparing measured concentrations of metals in soils consisted of the following human health and ecological screening values:

- ODEQ (1998) Guidance for Ecological Risk Assessment, Level II Screening Values.
- USEPA Region 9 PRGs for Industrial Soils (<http://www.epa.gov/region09/waste/sfund/prg/index.htm>).
- USEPA (2000a) Generic Soil Screening Levels (SSLs), for protection of human health.
- USEPA (2000b) Ecological Soil Screening Levels (EcoSSLs).
- Oak Ridge National Laboratory PRGs for protection of plants, wildlife, or soil invertebrates, U.S. Department of Energy (Efroymson et al. 1997).

Analytical data were compared to the lowest available screening criteria (Table 4). Surface soil sample analytical results indicated the following:

- Soil pH measurements ranged from 2.7 to 8.5. Except for 1 sample, the pH of waste pile materials ranged from 2.7 to 4.2, while site soils and background ranged from 6.4 to 7.6.
- Metals exceeding one or more of the comparison criteria in the background soil sample include aluminum, antimony, arsenic, barium, beryllium, chromium, lead, manganese, mercury, selenium, thallium, vanadium, and zinc.
- In the onsite soil samples, the following additional metals exceeded one or more of the comparison criteria: cadmium (2 samples), cobalt (1 sample), copper (1 sample), and silver (2 samples).
- Sample WP-SSS-01, collected at 0.5 ft below ground surface from a waste pile on the west side of the gulch in the main working area, had the highest concentrations of many of the metals detected; some of these concentrations were significantly higher than in any of the other samples collected. Metals occurring at significantly elevated concentrations in this sample included antimony, arsenic, barium, cadmium, copper, lead, mercury, silver, thallium, and zinc. Lead in this sample was reported at a concentration of 25,300 mg/kg.

- Excluding sample WP-SSS-01, the following metals (detected at concentrations exceeding comparison criteria) were detected in one or more samples at concentrations significantly exceeding (greater than 3 times) background: arsenic (1 WP sample), barium (1 WP sample), cadmium (1 WP sample), lead (3 WP samples), mercury (3 TA and 8 WP samples), silver (2 WP samples), and zinc (1 WP sample).
- Elevated concentrations of several metals were detected in sample TA-SSS-19, including barium, lead, and mercury. This sample was collected from the wetland area at the toe of a large waste rock pile on the east side of the main working area (see Figure 2). These results, along with visual observations of soil discoloration in this area, indicate that waste material has eroded from the pile into the wetland area.
- Sample WP-SSS-21 was collected from a possible waste rock pile in the center of Gold Gulch, toward the south end of the site. Although most of the metals concentrations detected in this sample did not exceed those in the background sample, this sample had the highest arsenic concentration (961 mg/kg) detected during the SI. This sample had a pH of 8.5.
- In locations where both shallow and deeper soil samples were collected from waste piles, there was no distinct correlation between metals concentration and depth.

Waste pile volumes were calculated for 15 waste rock piles at the site. Individual pile locations and volumes are provided in Appendix H. The total volume for the 15 waste piles identified is approximately 2,000 cubic yards.

Plant Tissue Samples

Plant tissue specimens were collected and analyzed for cyanide and TAL metals. Targeted plant species included ecologically important forage species for wildlife that could be used in a food chain analysis of ecological risks, if required in the future. The collected plant species at the Idol City Mine site was squaw current; in addition to being considered important browse material for wildlife, the plants were fruiting at the time of sampling. Squaw currant also was one of the few plant species that was repeatedly found growing on the waste and rock piles and also in the adjacent undisturbed areas, although some onsite examples exhibited signs of vegetative stress. Plant tissue samples were co-located with soil samples and were collected from 4 locations:

- A background, or reference, location on the hillside south of the mine area (BG-PLT-08)
- An onsite waste rock pile (WP-PLT-09)
- Onsite soil in the main working area (TA-PLT-10)
- Downgradient of the mine, adjacent to the downstream sampling location (TA-PLT-11).

A summary of the plant tissue analytical data is provided in Table 5. No comparison criteria are available for plant tissue. For most metals, concentrations detected in the 4 samples did not vary significantly. In sample WP-PLT-09, collected from the waste rock pile, manganese was detected at a concentration roughly an order of magnitude higher than in the other samples, while barium was detected at a concentration an order of magnitude less than in the other samples. Lead was also detected in this sample at a slightly higher concentration than in the other samples.

3.3.4 Soil Exposure Pathway Summary

There is evidence of releases of site-related contaminants to soil at the Idol City Mine site. A number of metals were detected in onsite surface soil and waste rock pile samples at concentrations exceeding comparison criteria. Although the background surface soil sample also exceeded comparison criteria for a number of metals, the following metals were detected at concentrations exceeding the comparison criteria and at elevated concentrations compared to background; aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, selenium, silver, thallium, vanadium, and zinc.

Erosion of fine-grained waste material was evident at the site adjacent to the waste piles along the wetland area in the northern portion of the site. These eroded waste materials likely enter the Gold Gulch stream during periods of high rainfall and snowmelt.

Two listed avian species, the pileated woodpecker and the black-backed woodpecker, were observed on or immediately adjacent to the site.

3.4 AIR

3.4.1 Targets

The target distance for air has been defined as both 1 and 4 mi radii from the site. There are no residences within 1 mi of the site. It is estimated that less than 10 people live within a 4-mi radius. The shortest distance between a regularly occupied structure and the site is estimated to be approximately 3 mi. Sensitive environments, including wetlands, which are located within 4 mi of the site are indicated in Section 3.3.1.

3.4.2 Air Pathway Summary

Air samples were not collected as part of this SI. The most likely current air exposure pathway is via inhalation of particulate matter. Arsenic was detected in 2 shallow soil samples (WP-SSS-01 and WP-SSS-21) at concentrations exceeding the USEPA soil screening level for inhalation of particulates (750 mg/kg); therefore, the potential exposure pathway is considered complete. Because the air pathway is directly related to the soil exposure pathway, addressing and/or eliminating contaminated soils at the site would likely render the air pathway incomplete.

4. SUMMARY AND CONCLUSIONS

The following site characteristics have been identified, based on site observations and the results of field and laboratory analyses:

- The site includes numerous piles of waste rock (from underground mining), placer tailings, and excavated overburden. While the color and texture of the materials helps in determining the source for some piles, the source of others is not clear. Not all piles at the site were sampled. Elevated metals concentrations were detected in many of the materials sampled, but the highest concentrations tended to occur in materials that appeared to be from underground mining.
- No evidence of AMD was found in surface water; however, materials in the waste rock piles from underground mining had soil pHs in the range of 3-4. Unimpacted areas and shallow soils had pH measurements ranging from 6 to 8.
- There is evidence of a release of hazardous substances to soil at the site. A number of metals were detected in surface soil and waste rock pile samples at concentrations exceeding comparison criteria. Although a background surface soil sample also exceeded comparison criteria for a number of metals, the following were detected at concentrations exceeding the comparison criteria and at elevated concentrations compared to background: aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, selenium, silver, thallium, vanadium, and zinc.
- There is evidence of a release of hazardous substances to surface water at the site. Erosion of fine-grained waste material was evident at the site, adjacent to waste rock piles. These eroded waste materials appear to enter the wetland areas and the Gold Gulch stream during periods of high rainfall and snowmelt.
- Elevated concentrations of several metals were detected in a sample of water discharging from the adit, including arsenic, calcium, iron, and manganese.
- Barium was detected at concentrations exceeding the lowest comparison criteria in all surface water samples, including the reference location. Additional metals detected at concentrations exceeding the criteria in surface water included arsenic, cadmium, lead, manganese, and zinc in the sample collected adjacent to the main mining area (Station 05).
- No fish species were observed in the Gold Gulch stream or in Trout Creek at the stream sampling stations. Because of their intermittent nature, habitat in these streams does not appear sufficient to support any type of fish species in the site area.
- Benthic habitat at the site is severely limited by the small size and intermittent nature of the streams. Because of this, the benthic macroinvertebrate community should not be used as an indicator of the mine's effects on the stream.
- Two listed amphibian species were observed in an onsite pond during the SI; Northern red-legged frog (Federal SOC and ODFW SV/SU status) and Oregon spotted frog (Federal C and ODFW SC status). Somewhat elevated concentrations of arsenic and manganese (above comparison criteria and the stream reference sample) were detected in surface water collected from this pond.

- Two listed avian species were observed onsite or in the immediately surrounding area: pileated woodpecker (ODFW SV status) and black-backed woodpecker (ODFW SC status). The physical disturbance of the mine site area appears to have reduced the quality of habitat available to certain wildlife species, but undisturbed, suitable habitat is available in the areas surrounding the mine site.
- Groundwater is not used for drinking water within the target area; therefore, the groundwater pathway appears to be incomplete. Any impacted shallow groundwater at the site is expected to be very localized in nature, and to present a risk to nearby surface water bodies, in the form of springs and seeps.
- The air pathway is considered complete, as arsenic was detected in 2 shallow soil samples at concentrations exceeding the USEPA soil screening level for inhalation of particulates. However, because the air pathway is directly related to the soil pathway, reducing or eliminating contaminated soils at the site would likely render the air pathway incomplete. Further assessment of the air pathway is not considered necessary, if the soil pathway is addressed.

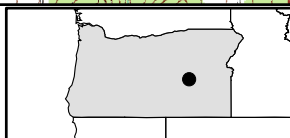
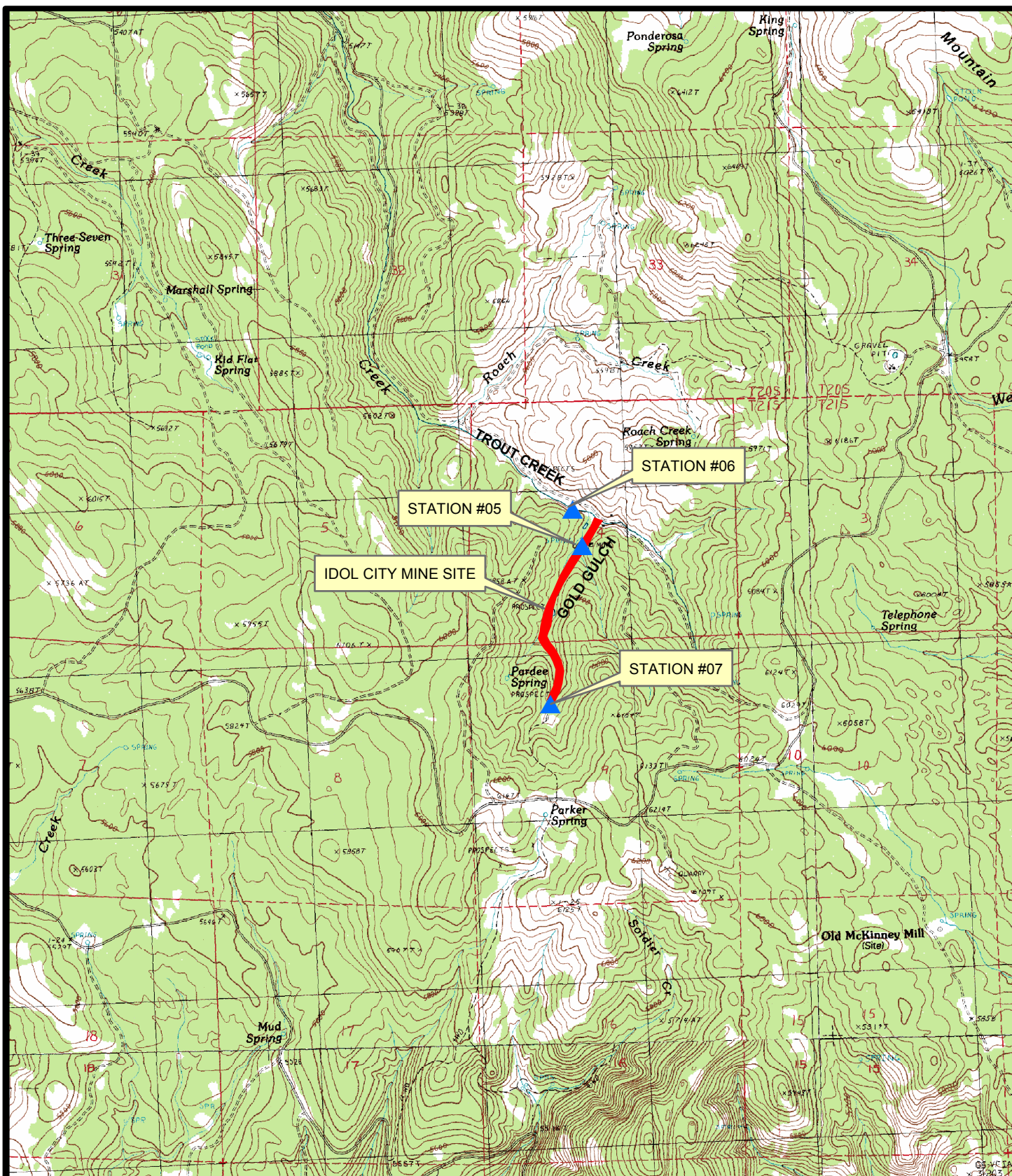
Based on the information presented herein, EA recommends performance of an Engineering Evaluation/Cost Analysis (EE/CA) at the Idol City Mine site. As part of the EE/CA, a risk assessment should be performed to assess the human and ecological impacts, establish site removal cleanup standards, and evaluate remediation technologies.

5. REFERENCES

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Figures



0 3000 6000 12000 Feet

Source: Oregon Geospatial Data Clearinghouse - USGS Topo maps



IDOL CITY MINE
SITE INSPECTION
MALHEUR NATIONAL FOREST, OREGON

FIGURE 1
SITE AND STREAM STATION
LOCATION MAP

PROJECT MGR:
CB

DESIGNED BY:
DC

CREATED BY:
DC

CHECKED BY:
CB

SCALE:
AS SHOWN

DATE:
10 NOV 2003

PROJECT NO:
1389009

FILE NO:
I:\NFS\STRM\LOCATION-
IDOLCITY.MXD

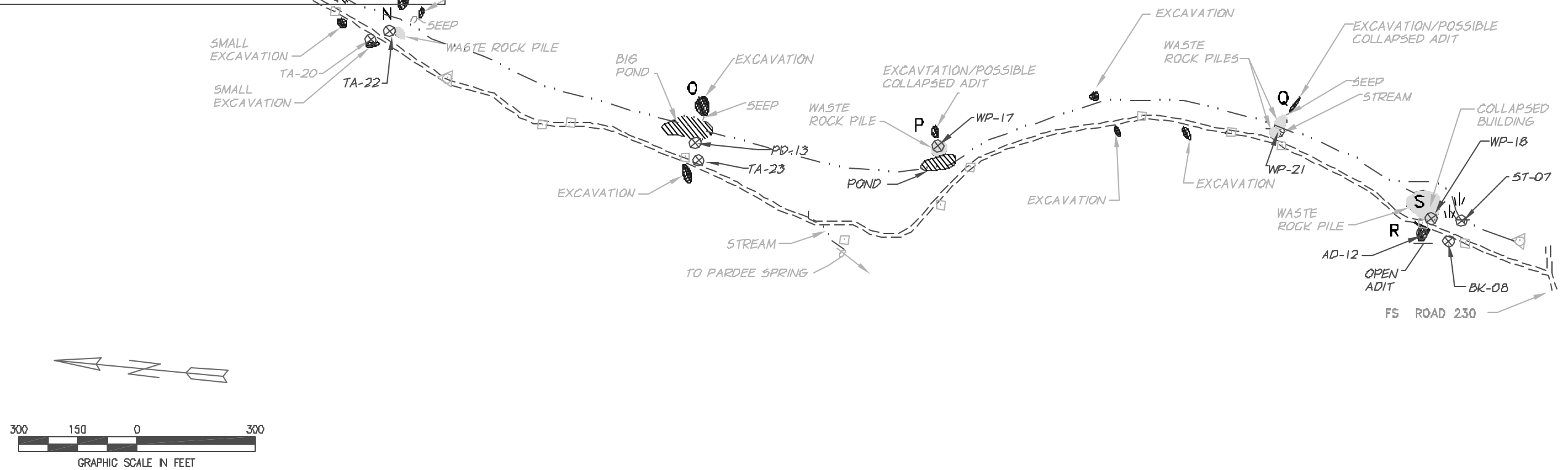
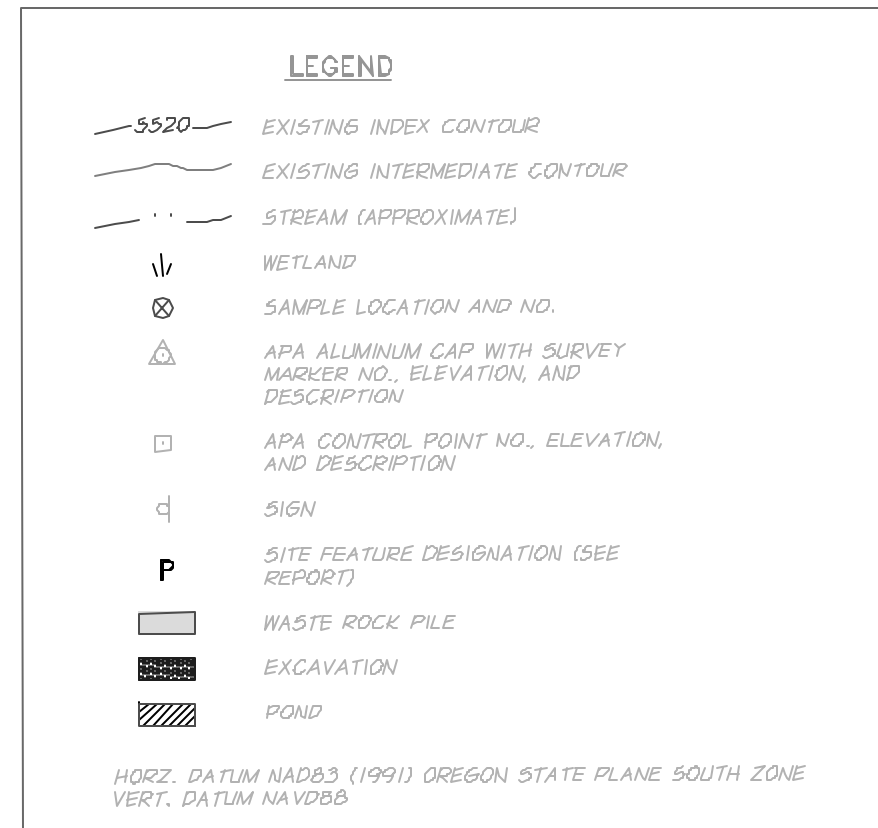
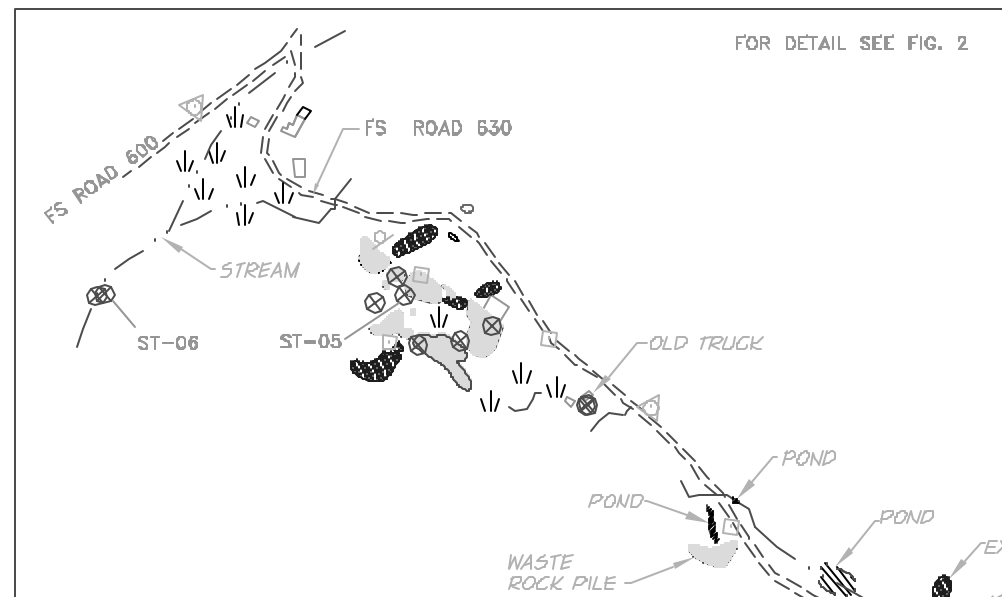


Figure 3. SITE FEATURES AND SAMPLING LOCATIONS – ENTIRE SITE AREA

Tables

**TABLE 1 - SURFACE WATER ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

page 1 of 3

Sample ID	Date	Laboratory General Chemistry												Field Parameters							
		ALKALINITY, BICARBONATE, mg/L	ALKALINITY, CARBONATE, mg/L	ALKALINITY, HYDROXIDE, mg/L	CONDUCTANCE, uS/cm	HARDNESS, mg/L	pH	REDOX POTENTIAL, mV	SULFATE, mg/L	SUSPENDED SOLIDS, TOTAL, mg/L	SUSPENDED SOLIDS, VOLATILE, mg/L	TOTAL ALKALINITY, mg/L	TOTAL DISSOLVED SOLIDS, mg/L	TEMPERATURE, °C	DISSOLVED OXYGEN, mg/L	SPECIFIC CONDUCTANCE, uS/cm	pH	TURBIDITY, NTUs	REDOX POTENTIAL, mV	AVERAGE DEPTH, feet	CURRENT VELOCITY, ft/sec
Adit																					
AD-SFW-12	07/22/03	341	<1	<1	1150	860	7.5	145	391	186	18.5	341	945	19.42	1.33	1019	6.85	161.3	-48.9	0.33	NM
Ponds																					
PD-SFW-13	07/22/03	145	<1	<1	403	460	7.6	162	69	22.8	<5	145	283	19.55	6.22	354	7.27	4.8	55.9	2 to 6	NA
PD-SFW-14	07/21/03	142	<1	<1	371	220	7.4	159	58.6	79.2	23.6	142	318	22.40	7.30	357	7.00	4.00	115	1	NA
Streams																					
ST-SFW-05 (at mine)	07/22/03	192	<1	<1	210	500	7.4	169	126	236	25.8	192	300	20.67	5.48	410	7.16	172.5*	129	0.17	NM
ST-SFW-06 (downstream)	07/21/03	254	<1	<1	451	272	7.4	160	18.1	19.8	<5	254	295	14.67	3.44	60	6.83	4.6	4.6	0.5	NM
ST-SFW-07 (upstream)	07/22/03	175	7.7	<1	400	216	8.2	158	43	8.4	<5	183	286	19.62	6.20	361	7.77	2.8	126.8	0.33	0.03
Comparison Criteria																					
EPA-Ecological	NA	NA	NA	NA	NA	>20	6.5-9	NA	NA	NA	NA	NA	NA	NA	8	NA	6.5-9	NA	NA	NA	NA
EPA-Human Health	NA	NA	NA	NA	NA	NA	5-9	NA	NA	NA	NA	NA	250	NA	NA	NA	5-9	NA	NA	NA	NA
Oak Ridge PRG	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OR-Ecological	NA	NA	NA	NA	NA	NA	6.5-9	NA	NA	NA	NA	NA	500	NA	6-11	NA	6.5-9	NA	NA	NA	NA
OR-Human Health	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

*Stream was not flowing at time of sample collection; a small hole was created to sample for surface water and this created turbidity in the water column.

**TABLE 1 CONTINUED - SURFACE WATER ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

page 2 of 3

Sample ID	Date	TAL Metals, µg/L												
		ALUMINUM	ARSENIC	BARIUM	CADMIUM	CALCIUM	COPPER	IRON	LEAD	MAGNESIUM	MANGANESE	POTASSIUM	SODIUM	ZINC
Adit														
AD-SFW-12	07/22/03	32.5	41.7	63.5	<0.6	175000	<2.4	2020	<1.3	53800	941	3040	14600	6.2
Ponds														
PD-SFW-13 (big pond)	07/22/03	36	14.3	78.9	<0.6	53800	3.6	178	1.4	15600	139	3200	12400	16.4
PD-SFW-14 (small pond)	07/21/03	<23.6	<4.8	83.9	<0.6	47000	6.2	214	<1.3	15300	29.4	5320	10400	41.8
Streams														
ST-SFW-05 (at mine)	07/22/03	26.4	8.3	113	1.2	64500	3.5	87	4.5	16500	100	3950	9900	162
ST-SFW-06 (downstream)	07/21/03	<23.6	<4.8	157	<0.6	72100	3.6	73.5	<1.3	17500	<0.7	3120	7630	13.4
ST-SFW-07 (upstream)	07/22/03	<23.6	<4.8	122	<0.6	62300	<2.4	55.6	<1.3	14800	<0.7	2950	10300	4.4
Comparison Criteria														
EPA Ecological		87	150	4	1.4 - 3.7	NA	22.9 - 75.1	1000	1.6 - 6.5	NA	120	NA	NA	196.7 - 639.1
EPA Human Health		NA	0.018	1000	NA	NA	1300	300	NA	NA	50	NA	NA	7400
Oak Ridge PRG		87	NA	4	1.1	NA	12	1000	3.2	NA	120	NA	NA	110
OR Ecological		87	NA	4	1.6 - 4.5	116000	22.9 - 75.1	1000	2.3 - 13.6	82000	120	53000	680000	199.5 - 648.2
OR Human Health		NA	0.022	1000	10	NA	NA	300	50	NA	50	NA	NA	NA

TABLE 1 CONTINUED - SURFACE WATER ANALYTICAL RESULTS **IDOL CITY MINE SITE INSPECTION**

page 3 of 3

Notes

- **Bold, shaded results indicate concentrations above the lowest applicable comparison criterion.**
- Cyanide (total) was analyzed for but not detected in any sample.
- All alkalinity was contributed by bicarbonate and carbonate; hydroxide alkalinity was not detected in any samples.
- The following dissolved metals were analyzed for but not detected in any sample: antimony, beryllium, chromium, cobalt, mercury, nickel, selenium, silver, thallium, and vanadium.
- Hardness-based criteria for cadmium, chromium III, copper, lead, nickel, silver, and zinc were calculated for each sample. The range of calculated criteria is indicated.

< = Analyte was analyzed for but not detected.
 NA = Not available.
 NM = Not measurable (flow).

Units:

°C = Degrees celcius
 ft/sec = Feet per second
 mg/L = Milligrams per liter
 uS/cm = Microsiemens per centimeter
 mV = Millivolts
 ug/L = Micrograms per liter
 NTU = Nephelometric turbidity units

Comparison Criteria

Oregon Ecological - Criteria are the lowest of:

- ODEQ Water Quality Criteria, Protection of Aquatic Life, Fresh Chronic Criteria (OAR 340-041-001), or
- ODEQ (1998b) Guidance for Ecological Risk Assessment, Level II Screening Values for surface water.

EPA Ecological - Criteria are the lowest of:

- USEPA (2002) recommended ambient water quality criteria for freshwater aquatic organisms, chronic; hardness dependent values were calculated for each sample, or
- USEPA (2002) recommended ambient water quality criteria for freshwater aquatic organisms, Tier II secondary chronic values calculated by Oak Ridge National Laboratory (Suter & Tsao 1996).

Oak Ridge PRGs - Oak Ridge National Laboratory Preliminary Remediation Goals (Efroymson et al 1997c).

Oregon Human Health - ODEQ Water Quality Criteria, Protection of Human Health, Water and Fish Ingestion (OAR-340-041-001).

EPA Human Health - USEPA (2002) recommended ambient water quality criteria for protection of human consumption of fish.

Hardness dependent values were calculated for each sample; the range of values is indicated.

**TABLE 2 - PORE WATER ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

page 1 of 3

Sample ID	Date	Laboratory General Chemistry										Field Parameters					
		ALKALINITY, BICARBONATE, mg/L	ALKALINITY, CARBONATE, mg/L	ALKALINITY, HYDROXIDE, mg/L	CONDUCTANCE, uS/cm	HARDNESS, mg/L	pH, Std. Units	REDOX POTENTIAL, mV	SULFATE, mg/L	TOTAL ALKALINITY, mg/L	TOTAL DISSOLVED SOLIDS, mg/L	TEMPERATURE, °C	DISSOLVED OXYGEN, mg/L	SPECIFIC CONDUCTANCE, uS/cm	pH, std. Units	TURBIDITY, NTU	REDOX POTENTIAL, mV
Streams																	
ST-PW-05 (at mine)	07/22/03	186	<1	<1	454	580	7.3	170	58.8	186	312	16.69	6.22	204	7.23	150.0*	135.2
ST-PW-06 (downstream)	07/21/03	232	<1	<1	423	264	7.2	158	19.1	232	281	15.83	5.53	394	6.79	5.9	-9.0
ST-PW-07 (upstream)	07/22/03	177	5.4	<1	399	216	8	157	44.9	182	275	21.54	5.63	367	7.58	82	121.5
Comparison Criteria																	
EPA-Ecological		NA	NA	NA	NA	20000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oak Ridge PRG		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OR-Ecological		NA	NA	NA	NA	NA	NA	NA	NA	NA	500	NA	NA	NA	NA	NA	NA

*Stream was not flowing at time of sample collection; a small hole was created to sample for surface water and this created turbidity in the water column.

**TABLE 2 CONTINUED - PORE WATER ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

page 2 of 3

Sample ID	Date	TAL Metals, µg/L												
		ALUMINUM	ARSENIC	BARIUM	CADMIUM	CALCIUM	COPPER	IRON	LEAD	MAGNESIUM	MANGANESE	POTASSIUM	SODIUM	ZINC
Streams														
ST-PW-05 (at mine)	07/22/03	113	8.9	108	1.6	64100	5.2	415	62.5	16600	47.7	3570	9770	240
ST-PW-06 (downstream)	07/21/03	38.6	6.3	142	<0.6	67800	2.6	1820	<1.3	16400	456	3560	8250	12.9
ST-PW-07 (upstream)	07/22/03	30.9	<4.8	125	<0.6	62100	<2.4	65.6	1.5	14700	29.9	2940	10200	11.6
Comparison Criteria														
EPA-Ecological		87	150	4	1.4 - 2.8	NA	23.4 - 53.7	1000	1.6 - 4.4	NA	120	NA	NA	201.3 - 457.7
Oak Ridge PRG		87	NA	4	1.1	NA	12	1000	3.2	NA	120	NA	NA	110
OR-Ecological		87	NA	4	1.6 - 3.4	116000	23.4 - 53.7	1000	2.4 - 8.3	82000	120	53000	680000	204.2 - 464.2

**TABLE 2 CONTINUED - PORE WATER ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

page 3 of 3

Notes

- **Bold, shaded results indicate concentrations above the lowest applicable comparison criterion.**
- Cyanide (total) was analyzed for but not detected in any sample.
- All alkalinity was contributed by bicarbonate and carbonate; hydroxide was not detected in any samples.
- The following dissolved metals were analyzed for but not detected in any sample: antimony, beryllium, chromium, cobalt, mercury, nickel, selenium, silver, thallium, and vanadium.
- Hardness-based criteria for cadmium, chromium III, copper, lead, nickel, silver, and zinc were calculated for each sample. The range of calculated criteria is indicated.

< = Analyte was analyzed for but not detected.

NA = Not available.

NM = Not measured.

Units:

°C = Degrees celcius

ft/sec = Feet per second

mg/L = Milligrams per liter

uS/cm = Microsiemens per cubic centimeter

mV = Millivolts

ug/L = Micrograms per liter

NTU = Nephelometric turbidity units

Comparison Criteria

Oregon Ecological - Criteria are the lowest of:

- ODEQ Water Quality Criteria, Protection of Aquatic Life, Fresh Chronic Criteria (OAR 340-041-001), or
- ODEQ (1998b) Guidance for Ecological Risk Assessment, Level II Screening Values for surface water.

EPA Ecological - Criteria are the lowest of:

- USEPA (2002) recommended ambient water quality criteria for freshwater aquatic organisms, chronic; hardness dependent
- USEPA (2002) recommended ambient water quality criteria for freshwater aquatic organisms, Tier II secondary chronic

Oak Ridge PRGs - Oak Ridge National Laboratory Preliminary Remediation Goals (Efroymson et al 1997c).

Oregon Human Health - ODEQ Water Quality Criteria, Protection of Human Health, Water and Fish Ingestion (OAR-340-041-001).

EPA Human Health - USEPA (2002) recommended ambient water quality criteria for protection of human consumption of fish.

Hardness dependent values were calculated for each sample.

**TABLE 3 - SEDIMENT ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

Sample ID	TAL Metals, mg/kg																	
	Date	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM, TOTAL	COBALT	COPPER	IRON	LEAD	MAGNESIUM	MANGANESE	MERCURY	NICKEL	POTASSIUM
Adits																		
AD-PSD-12	07/22/03	9380	10	510	243	0.48	<0.1	16100	3.6	14	22	63500	12	1480	2570	0.15	7.3	1680
Ponds																		
PD-PSD-13 (big pond)	07/22/03	8020	2.3	68.8	226	0.47	0.15	3560	4.2	7.5	27.3	17300	14.8	1630	320	0.23	11.4	1410
PD-SSD-14 (small pond)	07/22/03	25400	7.5	118	618	1.3	11.9	10700	11.2	15.1	84.8	46300	486	2990	577	4.1	26.5	3530
Streams																		
ST-SSD-05 (at mine)	07/22/03	18000	4.6	142	422	1.1	6.3	2680	3.2	20.4	83.1	42100	1190	779	747	2.5	20.3	1540
ST-SSD-06 (downstream)	07/22/03	11200	1.5	20.3	180	0.48	0.42	3380	6.3	10	19.8	25700	22	5730	540	0.39	13.1	2360
ST-PSD-07 (upstream)	07/22/03	10600	2.7	45.7	221	0.62	<0.089	3170	6.3	9	23.3	28400	10.3	1890	533	0.23	8.5	1870
Comparison Criteria																		
Effects Range Low (ER-L)		NA	NA	8.2	NA	NA	1.2	NA	81	NA	34	NA	47	NA	NA	0.15	21	NA
Effects Range Medium (ER-M)		NA	NA	70	NA	NA	9.6	NA	370	NA	270	NA	218	NA	NA	0.71	51.6	NA
OR Risk Assess Level II Values		NA	3	NA	NA	NA	0.6	NA	37	NA	36	NA	35	NA	1100	0.2	18	NA
Probable Effects Level (PEL)		NA	NA	41.6	NA	NA	4.21	NA	160	NA	108	NA	112	NA	NA	0.696	42.8	NA
Threshold Effects Level (TEL)		NA	NA	7.24	NA	NA	0.676	NA	52.3	NA	18.7	NA	30.2	NA	NA	0.13	15.9	NA

**TABLE 3 CONTINUED - SEDIMENT ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

page 2 of 3

Sample ID	TAL Metals, mg/kg							Grain Size						TOTAL ORGANIC CARBON, mg/kg
	Date	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC	GRAVEL %	SAND, COARSE %	SAND, FINE %	SAND, MEDIUM %	SILT %	CLAY %	
Adit														
AD-PSD-12	07/22/03	3.2	<0.37	202	<0.96	20.8	76.3	33.5	14.2	14.2	17.3	12	8.8	18100
Ponds														
PD-PSD-13	07/22/03	0.9	<0.33	193	<0.87	16.7	60.1	21	14.1	18.1	20.1	12.2	14.5	15400
PD-SSD-14	07/22/03	2.5	1.3	351	<1.4	39.6	2050	0	0	5.6	0.7	35.1	58.6	42200
Streams														
ST-SSD-05 (at mine)	07/22/03	2.1	1.5	198	0.92	10.8	1660	42.8	16.5	10.3	18.4	6	6.1	12200
ST-SSD-06 (downstream)	07/22/03	1.2	<0.27	124	<0.69	27.5	186	41.9	20.7	4.7	21.6	8	3.1	2060
ST-PSD-07 (upstream)	07/22/03	1.5	<0.33	227	<0.85	28.7	77.5	32	16.4	17.5	22.6	6.1	5.4	12100
Comparison Criteria														
ER-L		NA	1	NA	NA	NA	150	NA	NA	NA	NA	NA	NA	NA
ER-M		NA	3.7	NA	NA	NA	410	NA	NA	NA	NA	NA	NA	NA
OR		NA	4.5	NA	NA	NA	123	NA	NA	NA	NA	NA	NA	NA
PEL		NA	1.77	NA	NA	NA	271	NA	NA	NA	NA	NA	NA	NA
TEL		NA	0.733	NA	NA	NA	124	NA	NA	NA	NA	NA	NA	NA

**TABLE 3 CONTINUED - SEDIMENT ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

page 3 of 3

Notes

Bold, shaded results indicate concentrations above the lowest applicable comparison criterion.

Cyanide (total) was analyzed for but not detected in any sample.

< = Analyte was analyzed for but not detected.
NA = Not available.

Units:

mg/kg = Milligrams per kilogram
ug/L = Micrograms per liter

Comparison Criteria

- Threshold Effects Level (TEL) and Probable Effects Level (PEL) from USEPA National Sediment Quality Survey, Screening Values for Chemicals Evaluated, http://www.epa.gov/waterscience/cs/vol1/appdx_d.pdf.
- Effects Range-Low (ER-L) and Effects Range-Medium (ER-M), National Oceanic and Atmospheric Administration (NOAA), from USEPA (1997) National Sediment Quality Survey, Screening Values for Chemicals Evaluated.
- ODEQ (1998) Guidance for Ecological Risk Assessment, Level II Screening Values for freshwater sediment (there was no criterion for total arsenic; therefore, the most conservative criterion, for arsenic 3, was used).

Oak Ridge National Laboratory values are not included; they are compiled from TEL and ER-L values, and USEPA Assessment and Remediation of Contaminated Sediment (ARCS) program values which exceed TELs.

**TABLE 4 - SOIL ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

Sample Id	Sample Depth	Sample Date	pH	TAL Metals, mg/kg																							
				ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM, TOTAL	COBALT	COPPER	IRON	LEAD	MAGNESIUM	MANGANESE	MERCURY	NICKEL	POTASSIUM	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC	
Background																											
BG-SSS-08	0.5	07/22/03	6.7	13600	8	107	424	0.64	<0.032	4010	6.3	11	27.4	32400	17.2	1250	1410	0.1	11.5	2880	2	0.21	393	3.5	30.9	102	
Test Area																											
TA-SSS-10	0.5	07/22/03	6.6	11100	1.8	26.2	358	0.55	<0.031	3180	6.1	9.2	25.9	26500	35.6	1850	701	0.48	11	2650	1.6	0.12	302	2	23.9	78.2	
TA-SSS-11	0.5	07/22/03	7	13700	1.8	44.9	299	0.69	<0.029	4770	9.5	12.8	31.9	32600	12.7	3200	719	0.22	16.7	2300	1.7	0.11	219	2.5	34.3	74.8	
TA-SSS-19	0.3	07/22/03	7	13800	2.9	87.3	818	0.85	<0.042	6640	7.8	15.2	36.4	45900	30.7	2370	740	0.42	17.3	2530	2.5	0.19	248	3.3	32.3	264	
TA-SSS-20	0.5	07/22/03	6.4	15700	1.7	39.8	330	0.68	<0.03	3430	10.7	21.5	43.4	36600	12.4	3210	1450	0.06	26.8	2410	2	0.2	297	2.9	35.8	104	
TA-SSS-23	0.5	07/23/03	7.6	13000	1.4	198	716	0.51	<0.056	3140	7.3	11.6	37.5	23900	27.5	1860	557	0.15	14.8	1590	<0.32	<0.21	63	<0.53	27.2	54.5	
TA-SUS-22	1.0	07/23/03	7	5290	2.7	68.1	820	0.61	<0.032	4760	3.5	12.5	18.8	38800	13	809	1010	0.35	9.9	2330	2.3	<0.096	146	3.3	24.4	91	
Waste Pile																											
WP-SSS-01	0.5	07/22/03	3.4	2590	24.6	847	2060	<0.021	27.1	992	1.2	1.9	167	19900	25300	80.2	74.3	103	2.3	2270	2.5	45	<225	14.5	5.4	3510	
WP-SSS-02	0.5	07/21/03	2.8	2710	11.6	114	1770	0.15	0.96	3540	0.59	1.3	17.3	17100	1360	255	88.6	1.7	1.3	1850	0.56	2.4	167	0.96	5.3	218	
WP-SSS-03	0.5	07/21/03	3.6	2270	1.7	43.7	533	0.21	<0.064	17200	0.46	3.6	13.1	25600	46.6	254	201	0.46	2.2	1930	0.81	<0.23	130	0.87	5.6	45.1	
WP-SSS-09	0.5	07/21/03	3.2	1920	2.3	43.8	573	0.11	<0.029	8400	1.8	4.1	26	33900	21.1	294	115	0.28	4.4	2100	2.1	0.095	148	1.9	5.6	32.1	
WP-SSS-17	0.5	07/22/03	3.7	2050	4.1	137	590	0.061	<0.031	671	1.1	2.4	24.7	17900	10.9	214	44.5	1	5.3	1260	1.8	<0.093	116	0.83	8.4	22	
WP-SSS-21	0.5	07/22/03	8.5	3140	6.5	961	26.1	0.5	<0.057	44700	0.81	7.4	23.6	44700	11.5	14300	2740	2	5.4	1730	<0.32	<0.21	61.4	<0.54	15.2	87.7	
WP-SUS-02	3.5	07/21/03	4.2	10200	1.9	49.5	438	0.69	9	3000	5.1	13.1	33.3	31700	102	1780	1490	0.37	16.9	2050	<0.37	<0.24	109	<0.62	24.7	1130	
WP-SUS-03	3.5	07/21/03	3.1	1740	2.3	37.3	361	0.042	<0.03	24600	2.3	2.6	10.5	42300	11.5	292	53.5	0.44	3	1760	2.8	<0.089	181	2.2	10.1	30.5	
WP-SUS-04	1.0	07/21/03	2.7	1180	1.7	42.2	391	<0.019	0.74	1870	0.29	0.23	3.7	3690	452	94.4	19.8	3.3	<0.19	1010	0.36	1.7	52.9	<0.27	0.98	83.1	
WP-SUS-18	5.5	07/22/03	3.4	4020	2.5	151	178	0.08	<0.031	4400	1.4	2.9	13.7	20400	21.8	376	84.3	1.3	2.2	2470	2.9	0.19	348	2	15.4	25.7	
Comparison Criteria																											
EPA Industrial PRG				100000	410	1.6	67000	1900	450	NA	450	1900	41000	100000	750	NA	19000	310	20000	NA	5100	5100	NA	67	7200	100000	
EPA Ecological				NA	21m	37p	NA	NA	29p	NA	5p	32b	61i	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	120i	
EPA Human Health				NA	31	0.4	5500	0.1	78	NA	270ip	NA	NA	NA	400	NA	NA	NA	1600	NA	390	390	NA	NA	550	23000	
Oak Ridge				NA	5p	9.9p,w	283w	10p	4p,w	NA	0.4s	20p	60s	NA	40.5w	NA	NA	0.00051w	30p	NA	0.21w	2p	NA	1p	2p	8.5w	
OR Ecological				50p	5p	8p	85b	10p	4p	NA	NA	20p	50i	NA	16b	NA	100	0.1i	30p	NA	1p	2p	NA	1m,p	2p	50p	

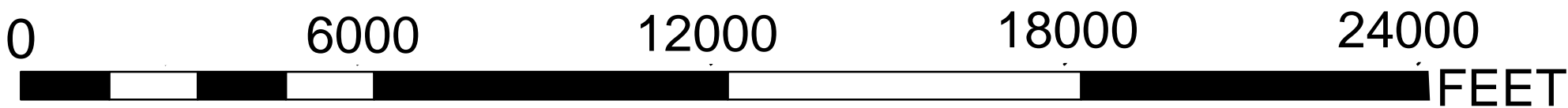
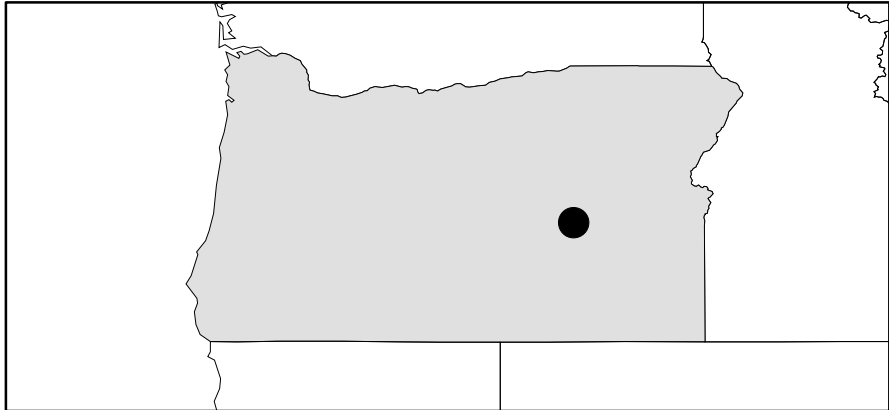
page 2 of 2

Sample No.	Sample Depth	Sample Date	SPLP Metals, mg/kg																		
			ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM, TOTAL	COBALT	COPPER	IRON	LEAD	MAGNESIUM	MANGANESE	NICKEL	POTASSIUM	SODIUM	VANADIUM	ZINC
Background																					
BG-SSS-08	0.5	07/22/03	3490	7.2	20.2	47.3	<0.2	<0.6	2270	1.8	<2	5	2660	1.8	406	87.8	3	2500	8580	4.7	24.5
Waste Pile																					
WP-SSS-03	0.5	07/21/03	2990	<4.7	<4.8	32.6	1.2	2.9	585000	<1.4	4.6	22.4	<33.3	5	5750	1100	7.3	911	8380	<2	367
WP-SUS-03	3.5	07/21/03	3620	<4.7	<4.8	30.8	0.71	1.6	595000	<1.4	6.9	25.5	1130	15.4	6160	797	7.8	986	8470	<2	244
WP-SUS-18	5.5	07/22/03	2760	<4.7	<4.8	60.6	0.65	0.8	213000	<1.4	9.8	29.9	284	2.1	3410	980	10.3	2240	24200	<2	150
Notes																					
<p>Bold, shaded results indicate concentrations above the lowest applicable comparison criterion.</p> <p>Cyanide (total) was analyzed for but not detected in any sample.</p> <p>The following metals were analyzed for but not detected in the SPLP analyses: mercury, selenium, silver, and thallium.</p> <p>< = Analyte was analyzed for but not detected.</p> <p>NA = Not available.</p> <p>Units:</p> <p>mg/kg = Milligrams per kilogram</p> <p>ug/kg = Micrograms per kilogram</p> <p>ug/L = Micrograms per liter</p> <p>Comparison Criteria</p> <ul style="list-style-type: none">- OR Ecological - ODEQ (1998) Guidance for Ecological Risk Assessment, Level II Screening Values - lowest criteria for bird (b), plant (p), invertebrate (i), and Mammal (m).- EPA Ecological - EPA (2000b) Ecological Soil Screening Levels - Lowest Criteria Indicators for bird (b), plant (p), invertebrate (I), and mammal (m).- Oak Ridge National Laboratory, US DOE (Efroymson et al 1997), Preliminary Remediation Goals (PRGs) for protection of plants (p), wildlife (w), or soil invertebrates (s).- EPA Human Heath Criteria - Generic Soil Screening Levels (SSLs) for Protection of Human Heath EPA (2000a). SSL is for ingestion unless indicated as inhalation of particulates by "ip".- EPA Region 9 PRGS for industrial soil (http://www.epa.gov/region09/waste/sfund/prg/index.htm).																					

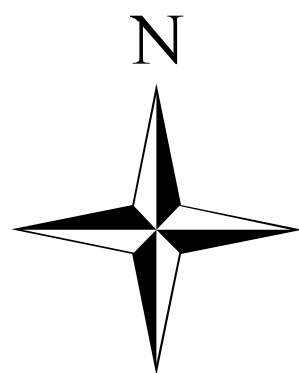
page 1 of 1

SAMPLE NO.	SAMPLE DATE	TAL Metals, mg/kg															
		ALUMINUM	ANTIMONY	BARIUM	CALCIUM	CHROMIUM, TOTAL	COPPER	IRON	LEAD	MAGNESIUM	MANAGANESE	MERCURY	NICKEL	POTASSIUM	SELENIUM	SODIUM	ZINC
Background																	
BG-PLT-08	07/22/03	41.3	<0.47	70.1	6930	0.18	1.6	47.8	0.22	991	22.4	0.029	<0.21	5740	0.42	89.7	7.5
Test Area																	
TA-PLT-10	07/22/03	66.7	<0.45	72.3	7470	0.18	1.9	68.2	0.4	1100	50.1	0.021	<0.2	5870	0.48	65.7	11.7
TA-PLT-11	07/22/03	56.4	<0.43	23.1	5150	0.15	1.3	65.3	0.29	827	23.1	0.023	<0.19	5570	<0.31	54.5	8.6
Waste Pile																	
WP-PLT-09	07/22/03	74	<0.47	2.6	5950	0.35	1.6	201	0.88	1680	321	<0.016	0.26	4390	0.46	85.5	11
Notes The following metals also were analyzed for but not detected in any sample: antimony, arsenic, beryllium, cadmium, cobalt, cyanide, silver, thallium, and vanadium. < = analyte was analyzed for but not detected. mg/kg = milligrams per kilogram																	

Plates



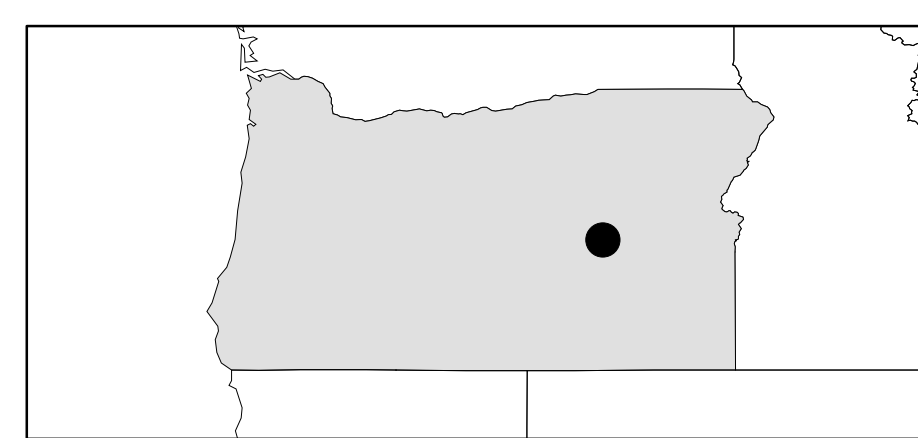
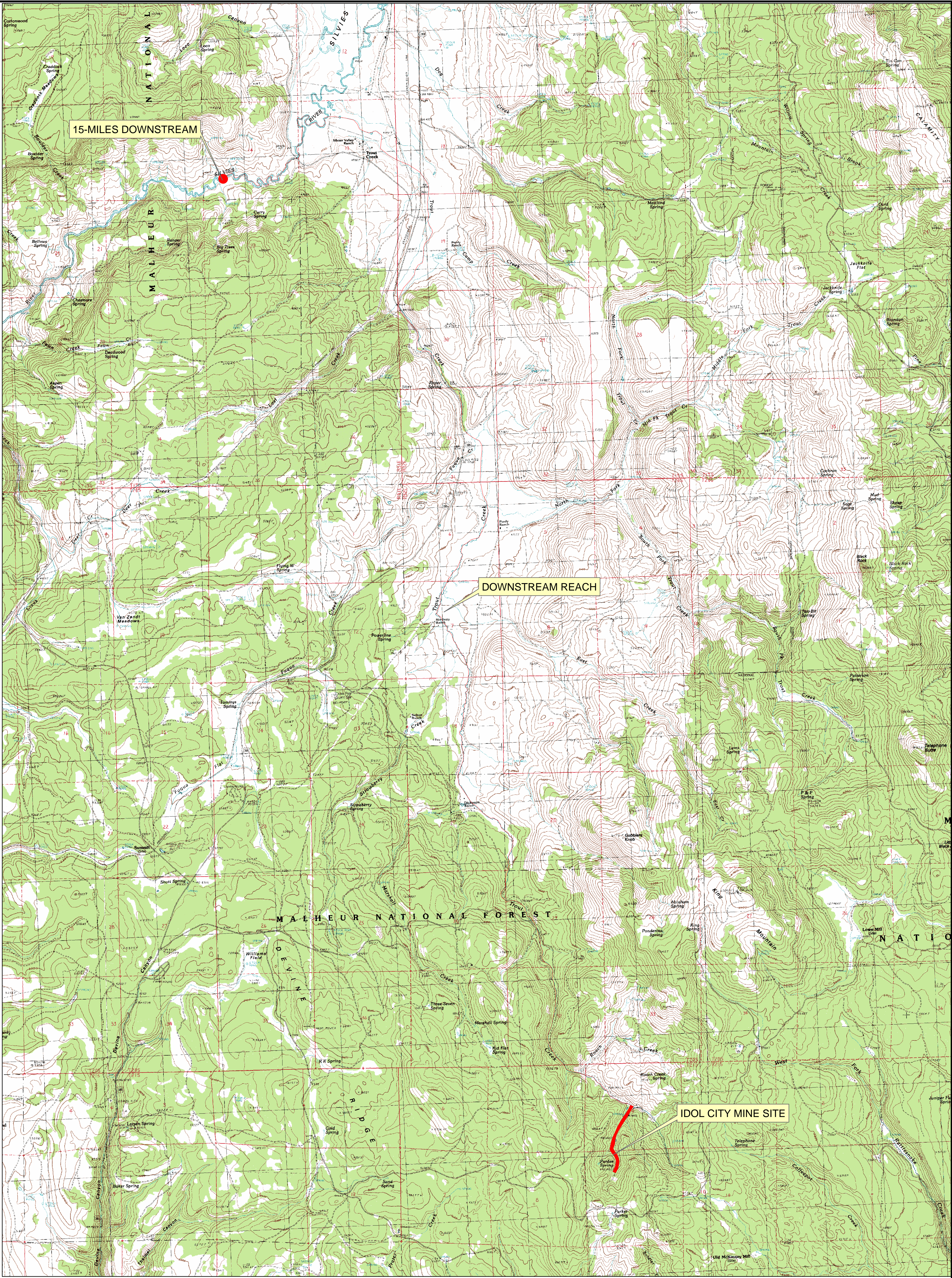
Source: Oregon Geospatial Data Clearinghouse - USGS Topo maps



IDOL CITY MINE
SITE INSPECTION
MALHEUR NATIONAL FOREST, OREGON

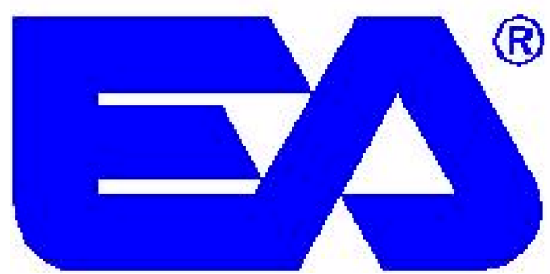
PLATE 1.
SITE LOCATION WITH
1 AND 4-MILE RADII.

PROJECT MGR: CB	DESIGNED BY: DC	CREATED BY: DC	CHECKED BY: CB	SCALE: AS SHOWN	DATE: 07 NOV 2003	PROJECT NO: 1389009	FILE NO: I:\NFSS\SITELOCATION- IDOLCITY.MXD
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0 3750 7500 15000 22500 30000 Feet

Source: Oregon Geospatial Data Clearinghouse - USGS Topo maps.



IDOL CITY MINE
SITE INSPECTION
MALHEUR NATIONAL FOREST, OREGON

PLATE 2.
SITE LOCATION AND
15-MILE DOWNSTREAM REACH.

PROJECT MGR:
CB

DESIGNED BY:
DC

CREATED BY:
DC

CHECKED BY:
CB

SCALE:
AS SHOWN

DATE:
07 NOV 2003

PROJECT NO:
1389009

FILE NO:
I:\NFS\SITELOCATION-
IDOLCITY.MXD

Appendix A

Deviations from the Project Plans

DEVIATIONS FROM THE PROJECT PLANS

Planned Activity	Actual Activity	Reason for Deviation
Drill and sample soil borings.	Subsurface soil samples were collected using a hand auger.	Use of a drilling rig was eliminated due to site access and fire danger restrictions.
Collect soil samples from 2 soil borings within and 2 downgradient of tailings/waste rock piles.	Collected soil samples from 1 downgradient location and an additional 5 locations within various waste piles.	Numerous waste piles were present at the site and additional sampling was performed to evaluate them.
Collect surface water and sediment samples at ponds #3 and #4.	No samples collected.	More than 4 ponds were present at the site. Samples were collected from 2 representative ponds.
None.	Additional sediment sample was collected at the open adit (Station 12).	Sediment was available. Also, this change was made to be more consistent with work being done for other mine SIs.
Collect benthic samples at riffles and pools using kick-net procedure.	One benthic sample was collected at Stations 05, 06, and 07.	No defined riffle or pool habitat was observed in the stream at these stations. Benthos were collected at Stations 05 and 07 by hand-picking organisms from rocks/sticks; the kick-net procedure was not used. Benthos were collected at Station 06 using two kick-net replications in the available habitat due to the small size of the stream.
None.	Additional benthic sample collected at the big pond (Station 13).	High-quality habitat was observed at this station. An additional sample was collected by using the kick-net in the available sediment and aquatic vegetation.
Include TSS and total TAL metals analyses for pore water samples.	These 2 analyses were not included for pore water samples.	This change was made to be more consistent with work being done for other mine SIs; it was made with concurrence from the On-Scene Coordinator (OSC).
Analyze plant tissue samples for TAL metals only.	Cyanide analyses was added for plant tissue samples.	This change was made to be more consistent with work being done for other mine SIs; it was made with concurrence from the OSC.
Include Total Organic Carbon (TOC) analyses for surface water samples.	TOC was not included for surface water.	This change was made to be more consistent with work being done for other mine SIs; it was made with concurrence from the OSC.

Appendix B

Site Photographs



Photo 1 Date: 7/22/03 Looking southward across the entrance to the Idol City Mine site from the
Time: 1945 hillside to the north. The main house, bunkhouse, and collapsed log structure
are shown.



Photo 2 Date: 7/22/03 Bunkhouse building near entrance to site, looking generally northeast; map
Time: 2004 location A.



Photo 3 Date: 7/22/03 Main house building near entrance to the site (on south side of the road); map
Time: 2000 location B.



Photo 4 Date: 7/22/03 Collapsed log structure near entrance to site; map location C.
Time: 2002



Photo 5 Date: 7/22/03 Apparent collapsed adit in main works area near the northern intersection of
Time: 1520 Road 630 and the bypass road; map location D.



Photo 6 Date: 7/22/03 Trash pit on the east side of Road 630 in the main working area; map location
Time: 1524 E.



Photo 7

Date: 7/22/03
Time: 1522

Possible fruit cellar on the west side of Road 630 in the main working area;
map location F.



Photo 8

Date: 7/22/03
Time: 1547

Looking generally northwest across the apparent inclined shaft area (now a
debris and water-filled depression) toward head-frame; map locations G and
H.



Photo 9 Date: 7/22/03 Looking northwest toward the large excavation (possible collapsed adit) on
Time: 1635 the west side of the gulch in the main working area; map location I.



Photo 10 Date: 7/22/03 Looking generally east toward the waste piles on the west side of the gulch in
Time: 1638 the main working area (this area is immediately east of that in Photo 9); map
location I.



Photo 11

Date: 7/22/03
Time: 1542

Collapsed building with open shaft inside and waste piles, looking generally north; map location J.



Photo 12

Date: 7/21/03
Time: 1852

Three soil sampling locations (No. 3, 4, and 9) on waste piles near open shaft; map location J.



Photo 13

Date: 7/22/03
Time: 1546

Collapsed adit or prospect just north of building with open shaft; map location K.



Photo 14

Date: 7/22/03
Time: 1540

Old truck with ball mill in southern part of main working area; map location L.



Photo 15

Date: 7/21/03
Time: 1406

Looking east across the big pond at the large excavation approximately half way up Road 630 in the site area; map location O.



Photo 16

Date: 7/22/03
Time:

Looking east at waste pile and possible collapsed adit area on east side of gulch; map location P.



Photo 17

Date: 7/22/03
Time: 1836

Waste rock piles almost blocking the gulch; map location Q.



Photo 18

Date: 7/22/03
Time: 1240

Open adit and water discharge at sampling station 12 at the south end of the site; map location R.



Photo 19 Date: 7/22/03 Looking from the open (southernmost) adit area across the road toward the
Time: 1236 waste rock/tailings pile and collapsed structure; map location S.



Photo 20 Date: 7/22/03 Soil sampling location WP-18 on the waste rock/tailings pile across Road 630
Time: from the open adit. Note the light-colored material pulled from the boring at
depth; map location S.



Photo 21

Date: 7/22/03
Time: 1350

Upstream sampling station 07 in Gold Gulch.



Photo 22

Date: 7/21/03
Time: 1830

Stream sampling station 05 in the main workings area (very narrow stream segment).



Photo 23

Date: 7/21/03
Time: 1600

Downstream sampling station 06 on Trout Creek.



Photo 24

Date: 7/22/03
Time: 1015

Large pond at sampling station 13 with populations of *Lemna minor* and *Lemna major*.



Photo 25 Date: 7/21/03 Overview of sampling station 14 in the pond in the main working area.
Time: 1740



Photo 26 Date: 7/21/03 Sample location WP-SSS-02, on waste rock pile just north of head frame.
Time: 1945 Note the darker soil excavated at depth.



Photo 27

Date: 7/22/03
Time: 1640

Overview of sampling station 10 (colocated soil and plant tissue samples).

Appendix C

General Information Form

GENERAL INFORMATION FORM

GENERAL

Region/Station: 06 Forest Number: 04 District No.: _____
Congressional District: 02

Project Name: Idol City Mine
Project Type: Site Inspection
Regional Priority: NA
5th Level HUC: 5th = Trout Creek
4th = 17120002 Silvies River

Single Site: x Multiple Site: _____

List all site names in multiple sites: _____

ENVIRONMENT

Watershed Name: Silvies River
Regional Watershed Priority: 02
Watershed size (acres): ~1300 mi²
Size of disturbed area (acres): Approx. 15 acres
Nearest surface water source: Trout Creek
Miles of stream impacted by site: ~500 ft.
303d listed impaired surface water Yes _____ No x
If 303d listed impaired, what are the water quality limited contaminants? _____

Is the site affecting a Wild and Scenic river Yes _____ No x

Describe potential for a catastrophic failure if not addressed: Low

Beneficial uses downstream: Recreation, aquatic habitat
Nearest critical sensitive area: Wetland
Distance sensitive area is from site: On site
Sensitive species: Red-legged frog, spotted frog, pileated woodpecker, black-backed woodpecker

T&E species: _____

Is the soil environment conducive to contaminant movement Yes x No _____

Activities in the watershed that also contribute to environmental damage (logging, roads, dredging, grazing, etc.): Roads, mining, grazing, ATV use

Would a removal action have a noticeable positive impact on or reduce the potential future risk of damaged resources Yes x No _____

Other critical information relating to the environment: _____

HUMAN HEALTH AND SAFETY

	Within 200 ft of the Site	Within 4 mi of the Site	Within 15 mi of the Site
Year round population based on residences	0	<10	NA
Seasonal population based on residences	0	<10	NA
Water wells	0	0	NA
Surface water intakes	0	0	0

Recreational activities within 200 ft of the site:

ATV riding, hiking

Recreational activities that occur within 15 mi of the site:

ATV riding, camping, hiking, hunting, fishing

Established recreational sites within 200 ft of the site:

ATV use observed on site

Established recreational sites within 15 mi of the site:

Informal camping areas, trails

Depth to groundwater (ft):

NA

Beneficial uses downstream:

Recreation, aquatic habitat

Physical hazards:

Steep slopes, debris, ponds, adits and shafts

Hazard	
Dangerous Highwall	No
Subsidence	No
Vertical Opening/Shaft	Yes
Dangerous Impoundment	No
Dangerous Pile and Embankment	No
Dangerous Slide	No
Hazardous Equipment or Unstable Structures	Yes
Hazardous Explosive Gases	No
Hazardous Water Body/Ponds	Yes
Solid Waste	Yes
Horizontal Opening/Adit	Yes

Other critical information relating to health and safety: _____

MIXED OWNERSHIP INFORMATION

% of the site on NFS land: 100

% of the watershed on NFS land: ~33

POTENTIAL CONTAMINATION

	Yes	No
Surface Water Indicators		
High turbidity in surface water		x
Active erosion into surface water	x	
Staining or precipitate/sediments		x
Aquatic kills		x
Visible plume		x
Discharges to surface water sources (i.e., adit drainage or leachate)	x	
Noticeable decline in aquatic population (compared to upstream of the site)		x
Surface water void of life in the area of the mine site		x
Site located in the floodplain/wetland	x	
Failing or Inadequate Design		
Oversteepened slopes		x
Unlined ponds		x
Inadequate landfill design or dumps		x
Unstable retainment structure		x
Past Practices		
Uncontrolled landfill/dump		x
Improper disposal		x
Chemical/wastes were stored onsite in drums/tanks, etc.		x
Past practices at site used hazardous materials		x
Other Indicators		
Stressed vegetation	x	
Dead vegetation or lack of vegetation		x
Animal kills		x
Visual contaminants	x	
Heavily stained soils/salts present	x	

Other critical potential contaminant information: _____

ANALYTICAL/DOCUMENTED CONTAMINATION

Media	Distance	Location	Rate of Discharge	Contaminant	Exceedance	Background
Soil/Waste	On-site	Waste Piles	NA	Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Hg, Se, Ag, Tl, V, Zn	Various	Various
	On-site	Test Areas	NA	Al, As, Ba, Be, Cr, Co, Pb, Mn, Hg, Se, Tl, V, Zn	Various	Various
Sediment	On-site	Gold Gulch and Ponds	NA	Sb, As, Cd, Cu, Pb, Hg, Ni, Ag, Zn	Various	Various
	On-site	Adit	NA	Sb, As, Cu, Mn, Hg	Various	Various
	~500 feet	Trout Creek	NA	As, Cu, Hg, Zn	Various	Various
Water	On-site	Gold Gulch and Ponds	0.03 ft/sec	As, Ba, Cd, Pb, Mn, Zn, TDS	Various	Various
	On-site	Adit	Not Measurable	As, Ba, Ca, Fe, Mn, TDS	Various	Various
	~500 feet	Trout Creek	Not Measurable	Ba, TDS	Various	Various

ADDITIONAL STUDIES

Biological studies that show a decrease in the number and lower species diversity downstream of the site:

Yes _____ No x

Increased mortality in nesting wildlife:

Yes _____ No x

Other critical contaminant information:

Appendix D

Copies of Supporting Information

OREGON NATURAL HERITAGE INFORMATION CENTER

Institute for Natural Resources



OREGON STATE UNIVERSITY
1322 SE Morrison Street
Portland, Oregon 97214-2423

July 18, 2003

Jeryl Kolb
EA Engineering, Science, and Technology
12011 Bellevue-Redmond Road, Suite 200
Bellevue, WA 98005

Dear Mr. Kolb:

Thank you for requesting information from the Oregon Natural Heritage Information Center (ORNHIC). We have conducted a data system search for rare, threatened and endangered plant and animal records for your Idol City Mine Sites in Township 21 South, Range 32 East, Sections 4 and 9, W.M.

Zero (0) records were noted within a two-mile radius of your project.

Please remember that the lack of rare element information from a given area does not mean that there are no significant elements there, only that there is no information known to us from the site. To assure that there are no important elements present, you should inventory the site, at the appropriate season.

Please note that at this time ORNHIC does not have comprehensive computerized records available for all anadromous fish in Oregon. For more information on anadromous fish you may wish to contact NMFS at: 525 NE Oregon Street; Portland, Oregon 97232-2737. Please also note that the U.S. Fish and Wildlife Service now has jurisdiction over coastal cutthroat trout.

This data is confidential and for the specific purposes of your project and is **not to be distributed**.

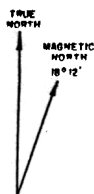
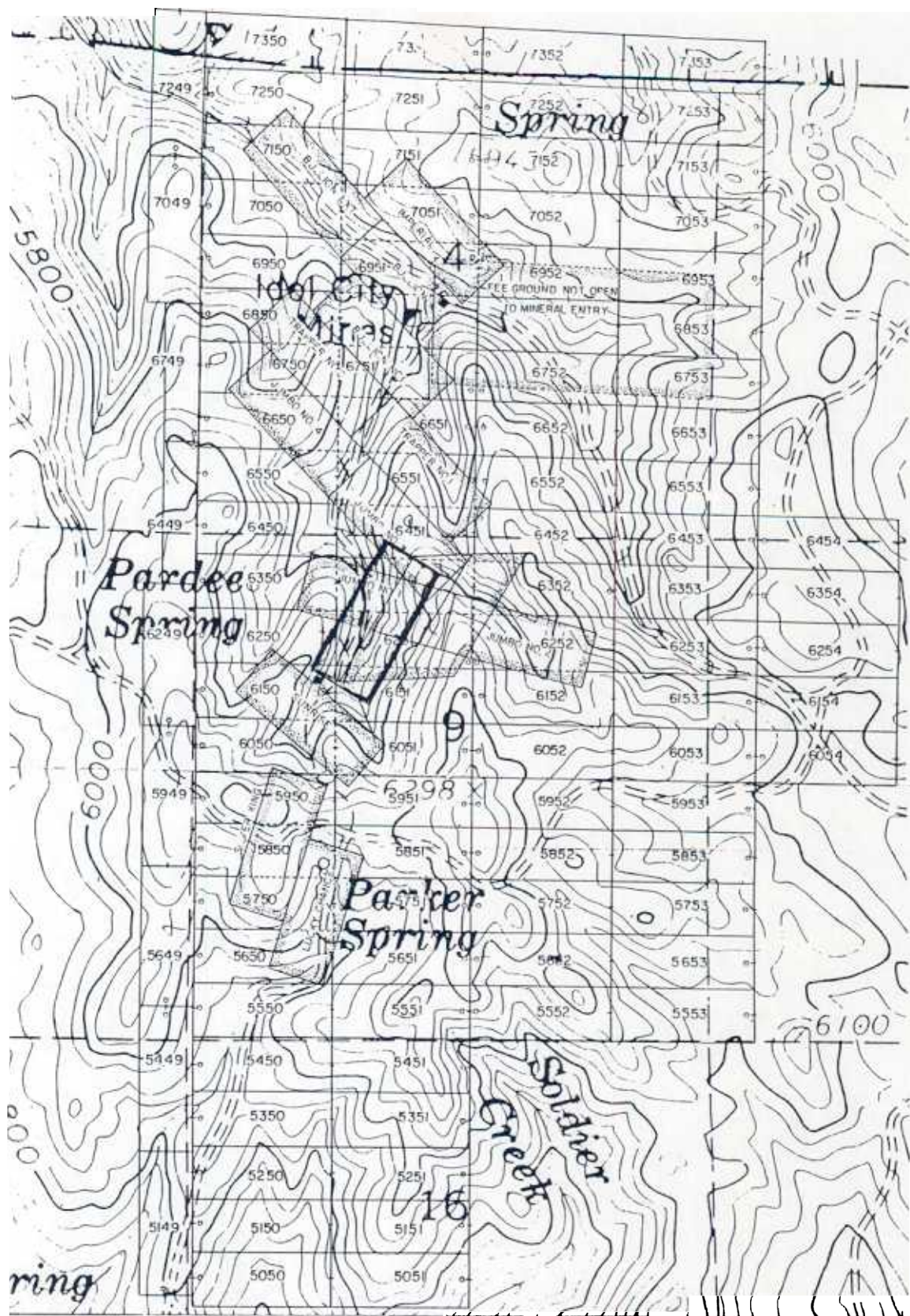
If you need additional information or have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cliff Alton', with a long horizontal flourish extending to the right.

Cliff Alton
Conservation Information Assistant

encl.: invoice (H-071803-CWA7)



• DENOTES DISCOVERY MONUMENT

NORANDA EXPLORATION INC.

SLEEPER LODGE MINING CLAIMS

IDOL CITY MINING DISTRICT
HARNEY CO., OREGON

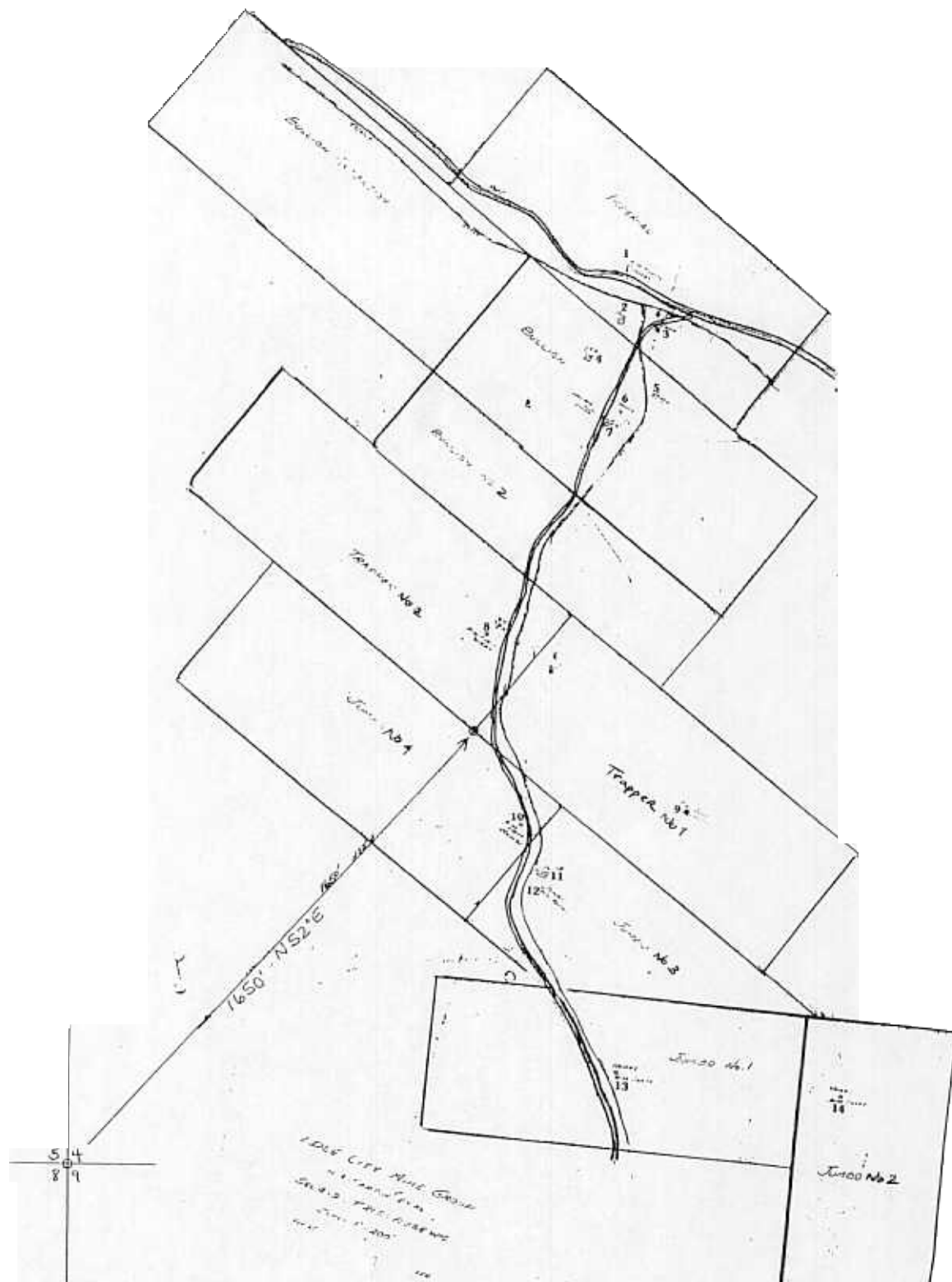
SURVEYED AND DRAWN BY
SALISBURY & DIETZ INC.
SPOKANE, WASHINGTON

Date: Oct. 1981

Scale: 1" = 1,000'

Drafted: B. Burton

Plate 5a



LEGEND (from north to south)

Key	Claim	Description on map	Location
1	Imperial	Disc Tunnel (caved)	North of 600 road and Trout Creek
2	Imperial	Mill	SW of Trout Creek/Gold Gulch confluence
3	Imperial	Camp	Both sides of 630 road, SW of 600 junction
4	Bullion	Cut (IC 6)	West of 630 road (about 150' west of inclined shaft)
5	Bullion	(Tunnel) caved	East of Gold Gulch and 630 road
6	Bullion	Shaft	Between Gold Gulch and 630 road
7	Bullion	Inclined Shaft (IC 4-5)	Between Gold Gulch and 630 road
8	Trapper No. 2	Disc Shaft (caved)	West of 630 road
9	Trapper No. 1	Disc Shaft (caved)	Near center of claim
10	Jumbo No. 4	Disc Shaft (caved)	West of 630 road
11	Jumbo No. 3	Cut (IC 1-2)	East of Gold Gulch
12	Jumbo No. 3	Disc Tunnel (caved)	East of Gold Gulch / south of
13	Jumbo No. 1	Disc Shaft (caved)	East of Gold Gulch
14	Jumbo No. 2	Disc Shaft (caved)	NW part of claim

MAP SCALE

Original scale: 1" = 200'

Copy (reduced 50%): 1" = 400'

Appendix E

Aquatic and Terrestrial Investigation Tables

**TABLE E-1. MALHEUR NATIONAL FOREST SENSITIVE PLANT LIST FOR
IDOL CITY MINE SITE**

Scientific Name	Common Name	Habitat (Hitchcock)	Period when Identifiable
<i>Allium brandegei</i>	Wild onion	ND	Apr-June
<i>Allium campanulatum</i>	Wild onion	Alpine, dry	June-Aug
<i>Allium atratus owyheensis</i>	Wild pea	ND	ND
<i>Allium diaphanum diurnum</i>	Wild pea	ND	Apr-June
<i>Astragalus tegetaroides</i>	Wild pea	Dry ponds, pine forests	May-Sept
<i>Botrychium ascendens</i>	Grape fern	Moist areas	July-Sept
<i>Botrychium crenulatum</i>	Grape fern	Moist areas	July-Sept
<i>Botrychium lanceolatum</i>	Grape fern	Moist areas	July-Sept
<i>Botrychium minganense</i>	Grape fern	Moist areas	July-Sept
<i>Botrychium pinnatum (boreale)</i>	Grape fern	Moist areas	July-Sept
<i>Bupleurum americanum</i>	Wild carrot	Rock outcrops	June- Aug
<i>Calochortus longebarbatus</i>	Long bearded Sego Lilly	Wet areas	July-Aug
<i>Cymoterus nivalis</i>	Wild carrot	High mountains	June-Aug
<i>Cypripedium fasciculatum</i>	Ladyslipper orchid	Open coniferous forest	May-Aug
<i>Dryopteris filix-mas</i>	Male Wood-fern	Moist areas	June-Sept
<i>Geum rossi v. turbinatum</i>		Alpine talus	July-Aug
<i>Lomatium erythrocarpum</i>	Wild parsley	ND	July Aug
<i>Luina serpentina</i>	Colonial Luina	Rocky serpent.	June -Aug
<i>Lupinus cusickii</i>	(L. lepidus)	Blue Mountains	June -Aug
<i>Lycopodium complanatum</i>	Ground cedar	Moist coniferous forest	June-Sept
<i>Mimulus washingtonensis</i>	Washington Monkeyflower	ND	June-July
<i>Oryzopsis hendersonii</i>	Ricegrass	Dry sage/pond pine	May- July
<i>Pellaea bridgesii</i>	Bridge's Cliff Brake Fern	Rocky slopes	May-Oct
<i>Phacelia minutissima</i>	Least phacelia	ND	June-July
<i>Pleuropogon oregonus</i>	Semaphore (nodding grass)	ND	June-Aug
<i>Ranunculus oresterus</i>	Buttercup	Wet areas, foothills	May-June
<i>Thelypodium eucosmum</i>	Thelypody	Lower canyons	June-July
<i>Thelypodium howellii</i>	Thelypody	ND	May-July

Source: U. S. Forestry Service

ND = Not determined

TABLE E-2. HARNEY COUNTY LISTED WILDLIFE SPECIES IN THE BLUE MOUNTAIN ECOREGION

Scientific Name	Common Name	Federal and (State) Status
AVIAN SPECIES		
<i>Accipiter gentilis</i>	Northern Goshawk	SoC
<i>Ammodramus savannarum</i>	Grasshopper sparrow	SV/SP (Or)
<i>Amphispiza belli</i>	Sage sparrow	SC (Or)
<i>Athene cnicularia hypugaea</i>	Western burrowing owl	SoC, SC (Or)
<i>Buteo regalis</i>	Ferruginous hawk	SoC, SC (Or)
<i>Buteo swainsoni</i>	Swainson's hawk	SV (Or)
<i>Centrocercus urophasianus phaios</i>	Western greater sage-grouse	SoC, SV (Or)
<i>Chordeiles minor</i>	Common nighthawk	SC (Or)
<i>Chlidonias niger</i>	Black tern	SoC
<i>Coccyzus americanus</i>	Yellow-billed cuckoo	SoC, SC (Or)
<i>Contopus cooperi</i>	Olive-sided Flycatcher	SoC
<i>Dolichonyx oryzivorus</i>	Bobolink	SV (Or)
<i>Dryocopus pileatus</i>	Pileated Woodpecker	SV (Or)
<i>Empidonax traillii adastus</i>	Willow Flycatcher	SoC, SU (Or)
<i>Falco columbarius*</i>	Merlin	NA
<i>Falco peregrinus anatum</i>	Peregrine Falcon	LE (Or)
<i>Glaucidium gnoma</i>	N. Pygmy Owl	SV (Or)
<i>Grus canadensis tabida</i>	Greater sandhill crane	SV (Or)
<i>Haliaeetus leucocephus</i>	Bald Eagle	LT
<i>Icteria virens</i>	Yellow-breasted chat	SoC, SC (Or)
<i>Lanius ludovicianus</i>	Loggerhead shrike	SV (Or)
<i>Melanerpes lewis</i>	Lewis's Woodpecker	SoC, SC (Or)
<i>Numenius americanus</i>	Long-billed curlew	SV (Or)
<i>Oreotyx pictus</i>	Mountain quail	SoC, SU (Or)
<i>Otus flammeolus</i>	Flammulated Owl	SC (Or)
<i>Picoides albolarvatus</i>	White-headed Woodpecker	SoC, SC (Or)
<i>Picoides arcticus</i>	Black-backed woodpecker	SC (Or)
<i>Podiceps auritus</i>	Horned grebe	SP (Or)
<i>Riparia riparia</i>	Bank swallow	SU (Or)
<i>Sialia mexicana</i>	Western bluebird	SV (Or)
<i>Sitta pygmaea</i>	Pygmy Nuthatch	SC/SV (OR)
<i>Sphyrapicus thyroideus</i>	Williamson's sapsucker	SU (Or)
<i>Strix nebulosa</i>	Great Gray Owl	SV (Or)
<i>Stunella neglecta</i>	Western meadowlark	SC (Or)
<i>Tympanuchus phasianellus columbianus</i>	Columbian sharp-tailed grouse	SoC

TABLE E-2. CONTINUED

Scientific Name	Common Name	Federal and (State) Status
MAMMALIAN SPECIES		
<i>Antrozous pallidus pallidus</i>	Pallid Bat	SV (Or)
<i>Brachylagus idahoensis</i>	Pygmy Rabbit	SoC, SV (Or)
<i>Canis lupus</i>	Gray wolf	LE
<i>Corynorhinus townsendii pallescens</i>	Pale Western Big-eared Bat	SoC, SC (Or)
<i>Gulo gulo luteus</i>	California Wolverine	SoC, LT (Or)
<i>Lasionycteris noctivagans</i>	Silver-haired bat	SoC, SU (Or)
<i>Lasiurus cinereus</i> *	Hoary Bat	NA
<i>Lepus townsendii</i>	White-tailed jackrabbit	SU (Or)
<i>Lynx canadensis</i>	Canada Lynx	LT
<i>Myotis ciliolabrum</i>	Western Small-footed Bat	SoC, SU (Or)
<i>Myotis evotis</i>	Long-eared Bat	SoC, SU (Or)
<i>Myotis volans</i>	Long-legged Bat	SoC, SU(Or)
<i>Myotis yumanensis</i>	Yuma Bat	SoC
<i>Myotis thysanodes</i>	Fringed Bat	SoC, SV(Or)
<i>Sorex preblei</i>	Preble's shrew	SoC
REPTILE AND AMPHIBIAN SPECIES		
<i>Crotalus viridis</i>	Western rattlesnake	SV (Or)
<i>Phrynosoma platyrhinos</i>	Desert horned lizard	SV (Or)
<i>Rana luteiventris</i>	Columbia spotted frog	C, SU (Or)
<i>Sceloporus graciosus graciosus</i>	Northern sagebrush lizard	SoC, SV (Or)
FISH SPECIES		
<i>Cottus dendiarei</i>	Malheur mottled sculpin	SoC, SV(Or)
<i>Salvelinus confluentus</i>	Bull trout	LT, SV (Or)

Source: Oregon Natural Heritage Program (2001)

*Natural Heritage Rank only, no Federal or State status

C = Candidate, federal

LE = Listed Endangered, state or federal

LT = Listed Threatened, state or federal

SoC = Federal Species of Concern; under review by US Fish and Wildlife Service

Or= Oregon Fish and Wildlife Commission, Sensitive Species:

SC = Critical, listing is pending or may be appropriate

SV = Vulnerable; population declining, but listing not imminent

SP = Peripheral or naturally rare

SU = Undetermined status

**TABLE E-3. PLANT SPECIES OBSERVED ON SITE AT IDOL CITY MINE,
JULY 2003**

Scientific Name	Common Name
<i>Achillea millefolium</i> var. <i>lanulosa</i>	Western yarrow
<i>Anaphalis margaritacea</i>	Pearly everlasting
<i>Angelica genuflexa</i>	Kneeling angelica
<i>Aquilegia formosa</i>	Columbine
<i>Artemisia arbuscula</i>	Low sagebrush
<i>Artemisia rigida</i>	Stiff sagebrush
<i>Artemisia</i> sp.	Sagebrush species
<i>Aster conspicuus</i>	Showy aster
<i>Callitriche</i> sp.	Water-starwort species
<i>Carex obnupta</i>	Slough sedge
<i>Delphinium</i> sp.	Delphinium species
<i>Eleocharis palustris</i>	Creeping spikerush
<i>Eriogonum heracleoides</i>	Creamy buckwheat
<i>Galium boreale</i>	Northern bedstraw
<i>Geranium</i> sp.	Wild geranium
<i>Glyceria</i> sp.	Manna grass species
<i>Grindelia nana</i>	Low gumweed
<i>Hypericum perforatum</i>	St. John's wort
<i>Ipomopsis aggregata</i>	Desert trumpet
<i>Juncus</i> sp.	Rush species
<i>Juniperus occidentalis</i>	Western juniper
<i>Lemna minor</i>	Duckweed
<i>Lupinus sericeus</i>	Silky lupine
<i>Penstemon procerus</i>	Pincushion penstemon
<i>Potentilla gracilis</i>	Fivefinger cinquefoil
<i>Pseudotsuga menziesii</i>	Douglas fir
<i>Ranunculus aquatilis</i>	White water buttercup
<i>Ribes cereum</i>	Squaw currant
<i>Rumex crispus</i>	Curly dock
<i>Salix lasiandra</i>	Pacific willow
<i>Sitanion hystrix</i>	Bottlebrush squirreltail
<i>Sparganium emersum</i>	Narrowleaf bur-reed
<i>Symphoricarpos albus</i>	Common snowberry
<i>Thalictrum occidentale</i>	Western meadow rue
<i>Tragopogon dubius</i>	Oyster plant
<i>Veronica americana</i>	American speedwell

**TABLE E-4. WILDLIFE SPECIES OBSERVED AT IDOL CITY MINE,
JULY 2003**

Scientific Name	Common Name
AVIAN SPECIES	
<i>Carduelis tristis</i>	American goldfinch
<i>Certhia americana</i>	Brown creeper
<i>Corvus corax</i>	Common raven
<i>Cyanocitta stelleri</i>	Steller's jay
<i>Dryocopus pileatus</i> *	Pileated woodpecker
<i>Falco mexicanus</i>	Prairie falcon
<i>Junco hyemalis</i>	Dark-eyed junco
<i>Meleagris gallopavo</i>	Wild turkey
<i>Nucifraga columbiana</i>	Clark's nutcracker
<i>Parus atricapillus</i>	Black-capped chickadee
<i>Pheucticus melanocephalus</i>	Black-headed grosbeak
<i>Picoides arcticus</i> *	Black-backed woodpecker
<i>Picoides villosus</i>	Hairy woodpecker
<i>Pipilo chlorurus</i>	Green-tailed towhee
<i>Pipilo maculatus</i>	Spotted towhee
<i>Sitta canadensis</i>	Red-breasted nuthatch
<i>Sitta carolinensis</i>	White-breasted nuthatch
<i>Sphyrapicus nuchalis</i>	Red-naped sapsucker
<i>Turdus migratorius</i>	American robin
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
MAMMALIAN SPECIES	
<i>Canis latrans</i>	Coyote
<i>Citellus lateralis</i>	Golden-mantled squirrel
<i>Eutamias minimus</i>	Least chipmunk
<i>Odocoileus hemionus</i>	Mule deer
<i>Taxidea taxus</i>	Badger
AMPHIBIAN AND REPTILIAN SPECIES	
<i>Hyla regilla</i>	Pacific tree frog
<i>Rana aurora</i> **	Red-legged frog
<i>Rana pretiosa</i> **	Spotted frog
<i>Taricha granulosa</i>	Rough-skinned newt
<i>Thamnophis sirtalis</i>	Common garter snake

*Listed species for Harney County, see status in Table 2.

**Federal and State Status only, not listed for Harney County

**TABLE E-5. NUMBER AND RELATIVE ABUNDANCE OF TAXA COLLECTED
FROM POOL HABITAT, IDOL CITY MINE, 22 JULY 2003**

Taxa	IDOL-PD-BM-13	
	No.	%
Tubificidae	58	7.22
Helobdella stagnalis	1	0.12
Hyalella azteca	300	37.36
Hydracarina	5	0.62
Callibaetis	297	36.99
Enallagma	22	2.74
Aeshnidae	3	0.37
Corixidae	3	0.37
Notonecta	8	1.00
Nebrioporus	22	2.74
Brychius	18	2.24
Tropisternus	3	0.37
Chaoborus	3	0.37
Tanypodinae	3	0.37
Pentaneurini	16	1.99
Chironomini	19	2.37
Tanytarsini	10	1.25
Prionocera	8	1.00
Stagnicola	3	0.37
Pisidium	1	0.12
Total	803	100.00

**TABLE E-6. NUMBER AND RELATIVE ABUNDANCE OF TAXA COLLECTED
FROM RIFFLE HABITAT, IDOL CITY MINE, 21-22 JULY 2003**

Taxa	IDOL-ST-BM-05 (At mine)		IDOL-ST-BM-06 (Downstream)		IDOL-ST-BM-07 (Upstream)	
	No.	%	No.	%	No.	%
Turbellaria	--	--	1	0.09	4	2.35
Lumbriculidae	1	1.52	--	--	--	--
Tubificidae	--	--	24	2.15	7	4.12
Helobdella stagnalis	1	1.52	10	0.90	10	5.88
Ostracoda	--	--	4	0.36	--	--
Hydracarina	--	--	4	0.36	11	6.47
Ameletus	--	--	--	--	5	2.94
Siphonurus	--	--	83	7.44	--	--
Baetis tricaudatus	--	--	8	0.72	20	11.76
Heptageniidae	--	--	16	1.43	2	1.18
Paraleptophlebia	--	--	101	9.06	--	--
Ephemerellidae	--	--	--	--	1	0.59
Zapada cinctipes	--	--	--	--	3	1.76
Sweltsa	--	--	1	0.09	17	10.00
Limnopus	--	--	4	0.36	--	--
Notonecta	--	--	2	0.18	--	--
Ochrotrichia	--	--	--	--	1	0.59
Neophylax	--	--	--	--	2	1.18
Dicosmoecus gilvipes	--	--	10	0.90	--	--
Apatania	44	66.67	--	--	4	2.35
Hydroporus	--	--	8	0.72	--	--
Agabus	--	--	9	0.81	--	--
Dytiscus	1	1.52	--	--	--	--
Colymbetes	--	--	1	0.09	--	--
Laccophilus	--	--	4	0.36	--	--
Rhantus	--	--	9	0.81	--	--
Nebrioporus	--	--	31	2.78	1	0.59
Sanfilipodytes	--	--	8	0.72	6	3.53
Heterolimnius koebelei	--	--	4	0.36	--	--
Helophorus	--	--	--	--	4	2.35
Paracymus	--	--	4	0.36	--	--
Enochrus	--	--	4	0.36	1	0.59
Pentaneurini	--	--	4	0.36	--	--
Diamesinae	--	--	36	3.23	4	2.35
Orthocladinae	19	28.79	32	2.87	2	1.18
Chironomini	--	--	40	3.59	1	0.59
Tanytarsini	--	--	636	57.04	45	26.47
Dixa	--	--	--	--	2	1.18
Pericoma	--	--	--	--	1	0.59
Ptychoptera	--	--	--	--	1	0.59

Taxa	IDOL-ST-BM-05 (At mine)		IDOL-ST-BM-06 (Downstream)		IDOL-ST-BM-07 (Upstream)	
	No.	%	No.	%	No.	%
Simulium	--	--	--	--	6	3.53
Tipula	--	--	--	--	1	0.59
Dicranota	--	--	5	0.45	3	1.76
Hexatoma	--	--	4	0.36	3	1.76
Hemerodromia	--	--	8	0.72	--	--
Odontomyia	--	--	--	--	1	0.59
Caloparyphus	--	--	--	--	1	0.59
Total	66	100.00	1,115	100.00	170	100.00

**TABLE E-7. SUMMARY OF LEVEL 3 METRICS FOR MACROINVERTEBRATE
SAMPLING LOCATIONS NEAR IDOL CITY MINE**

Sample Number	Date	Sample Type	Sample Location	Taxa Richness	Mayfly Richness	Stonefly Richness	Caddisfly Richness	Sensitive Taxa	Sediment Sensitive Taxa	Modified HBI	Percent Tolerant Taxa	Percent Sediment Tolerant Taxa	Percent Dominant (single taxa)
IDOL-PD-BM-13	22-Jul-03	Pool	Big pond	20	1	0	0	0	0	7.9	52.8	8.6	37.4
IDOL-ST-BM-05	21-Jul-03	Riffle	At mine	5	0	0	1	1	0	2.4	4.5	1.5	66.7
IDOL-ST-BM-06	21-Jul-03	Riffle	Downstream	31	4	1	1	0	0	5.6	16.8	3.0	57.0
IDOL-ST-BM-07	22-Jul-03	Riffle	Upstream	30	4	2	3	1	0	4.7	15.9	8.2	26.5

HBI = Hilsenhof Biotic Index

TABLE E-8. SUMMARY OF HABITAT ASSESSMENT SCORES FOR IDOL CITY MINE SITE, JULY 2003

Habitat Parameter	Station		
	05 At mine	06 Downstream	07 Upstream
Epifaunal substrate/available cover	2	7	5
Embeddedness	9	15	12
Velocity/depth regime	2	3	3
Sediment Deposition	3	7	11
Channel flow status	1	3	2
Channel alteration	11	12	11
Frequency of riffles (or bends)	4	3	2
Bank stability			
Left bank	8	9	4
Right bank	3	6	6
Vegetative protection			
Left bank	8	9	4
Right bank	3	4	5
Riparian vegetative zone width			
Left bank	9	10	6
Right bank	3	3	6
SCORE	66	91	77

Appendix F

Soil Sample Log

TABLE F-1. SOIL SAMPLE LOG

Sample No.	Sample Depth	Date Collected	Time Collected	Soil Description
WP-SSS-01	0.5	7/22/2003	1040	Silty, sandy GRAVEL to gravelly SAND; tan to orange (waste rock)
WP-SSS-02	0.5	7/21/2003	710	Silty, gravelly SAND; tan to lt orange (waste rock). (Tan at surface, grades to reddish at ~6".)
WP-SUS-02	3.5	7/21/2003	740	Silty, gravelly SAND; dk brown to red brown, angular gravel (native soil?).
WP-SSS-03	0.5	7/21/2003	1630	Sl. silty, sandy GRAVEL, angular; tan to orange to lt. brown, dry to moist, loose to dense (waste rock).
WP-SUS-03	3.5	7/21/2003	1730	Silty, gravelly SAND; orangish-tan and mottled (orange-tan-gray), dry to moist, loose to med-dense (waste rock).
WP-SUS-04	1.0	7/21/2003	1820	Sl. silty, sandy GRAVEL, trace of cobbles, angular; buff to tan (waste rock).
BG-SSS-08	0.5	7/22/2003	1245	Silty, sl. gravelly SAND; dk. brown, moist, some roots (native soil).
WP-SSS-09	0.5	7/21/2003	1615	Silty, sandy GRAVEL; orange-brown, dry to moist (waste rock).
TA-SSS-10	0.5	7/22/2003	1100	Silty, sandy GRAVEL; brown to dk. brown, dry, dense (native soil).
TA-SSS-11	0.5	7/22/2003	1015	Silty, sandy GRAVEL, angular; brown (native soil or placer tailings?).
WP-SSS-17	0.5	7/22/2003	1330	Sl. silty, gravelly SAND; tan and orange, dry, loose (waste rock).
WP-SUS-18	5.5	7/22/2003	1230	Silty, gravelly SAND; tan to lt. brown (waste rock or tailings).
TA-SSS-19	0.3	7/22/2003	1500	Silty, gravelly SAND; dk brown, organic (native soil).
TA-SSS-20	0.5	7/22/2003	1520	Silty, gravelly SAND to silty sandy GRAVEL; brown to red brown (soil overburden?).
WP-SSS-21	0.5	7/22/2003	1835	Silty, sandy GRAVEL; orangish-tan (waste rock).
TA-SUS-22	1.0	7/23/2003	1315	Silty, sandy GRAVEL to silty, gravelly SAND; red-brown (soil overburden?).
TA-SSS-23	0.5	7/23/2003	1335	Silty, sandy GRAVEL to silty, gravelly SAND; brown to sl. Red-brown, dry to moist (soil overburden?)

Appendix G

Laboratory Analytical Reports

**TABLE G-1 - SURFACE WATER ANALYTICAL RESULTS
IDOL CITY MINE SITE INSPECTION**

Sample No.	Sample Date	TAL Metals and Cyanide, Unfiltered, µg/L																							
		ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM, TOTAL	COBALT	COPPER	CYANIDE	IRON	LEAD	MAGNESIUM	MANGANESE	MERCURY	NICKEL	POTASSIUM	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
AD-SFW-12	07/22/03	1510	<4.7	399	126	<0.2	<0.6	186000	<1.4	6.1	10.2	<10	37000	3.3	56200	1870	0.73	<2.1	3450	<3.4	<2.2	16500	<5.7	4.3	25.6
PD-SFW-13	07/22/03	80	<4.7	17.5	82.1	<0.2	<0.6	53800	<1.4	<2	3	<10	421	<1.3	15600	168	<0.1	<2.1	3200	<3.4	<2.2	10000	<5.7	<2	5.9
PD-SFW-14	07/21/03	473	<4.7	12.2	111	<0.2	2.2	49800	<1.4	<2	8.3	<10	2150	40.4	15300	167	<0.1	<2.1	4900	<3.4	<2.2	9620	<5.7	<2	170
ST-SFW-05	07/22/03	3940	5.8	61.2	369	0.58	17.2	73300	<1.4	11.1	97.3	<10	10900	1540	18400	2440	0.44	9.7	4880	<3.4	<2.2	10100	<5.7	11.7	1550
ST-SFW-06	07/21/03	448	<4.7	<4.8	186	<0.2	0.67	72200	<1.4	<2	4.9	<10	572	11.1	17300	57.5	<0.1	<2.1	3410	<3.4	<2.2	7190	<5.7	<2	39.7
ST-SFW-07	07/22/03	91.7	<4.7	<4.8	121	<0.2	<0.6	60800	<1.4	<2	<2.4	<10	168	<1.3	14400	9.3	<0.1	<2.1	2840	<3.4	<2.2	10000	<5.7	<2	4.7

Notes:

TAL = Total Analyte List

< = Constituent was analyzed for but not detected.

**TABLE G-2 - ACID BASE ACCOUNTING (ABA) RESULTS FOR SOIL SAMPLES
IDOL CITY MINE SITE INSPECTION**

Sample No.	Sample Depth (feet)	Date	Neutralization Potential (Kg CaCO ₃ /ton)	Fizz Rating (no units)	Maximum Potential Acidity (Kg CaCO ₃ /ton)	Neutralization Potential (Kg CaCO ₃ /ton)	Paste pH	Sulfate Sulfur (Wt %)	Sulfide Sulfur (Wt %)	Total Sulfur (Wt %)
Background										
BG-SSS-08	0.5	07/22/03	0.5	none	0.3	0.8	6.1	0.05	0.01	0.06
Waste Piles										
WP-SSS-03	0.5	07/21/03	-26.4	none	14.4	-12.0	4.4	1.24	0.46	1.7
WP-SUS-03	3.5	07/21/03	-6.5	none	8.8	2.3	3.4	1.83	0.28	2.11
WP-SUS-18	5.5	07/22/03	-11.4	none	4.4	-7.0	3.7	0.50	0.14	0.64

Kg CaCO₃/ton = kilograms of calcium carbonate needed to neutralize one ton of waste/soil. Negative number indicates lack of CaCO₃, positive value indicates excess.

**STL Burlington
Colchester, Vermont**

**Sample Data Summary
Package**

SDG: IDW001

September 15, 2003

Ms. Jennifer Kindred
EA Engineering
12011 Bellevue-Redmond Rd.
Suite 200
Bellevue, WA 98005

Re: Laboratory Project No. 23046
Case No. 23046; SDG: IDW001

Dear Ms. Kindred:

Enclosed are the analytical results of samples received intact by Severn Trent Laboratories on July 26, 2003. Laboratory numbers have been assigned and designated as follows:

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Sample Date</u>	<u>Sample Matrix</u>
Received: 07/26/03 ETR No: 95013			
535879	IDOLPDSFW14	07/21/03	Water
535880	IDOLPDSFW14F	07/21/03	Water
535881	IDOLSTSFW06	07/21/03	Water
535882	IDOLSTSFW06F	07/21/03	Water
535883	IDOLSTPW06	07/21/03	Water
535884	IDOLSTPW06F	07/21/03	Water
535885	IDOLSTPW07	07/22/03	Water
535885MS	IDOLSTPW07MS	07/22/03	Water
535885DP	IDOLSTPW07REP	07/22/03	Water
535886	IDOLSTPW07F	07/22/03	Water
535886MS	IDOLSTPW07FMS	07/22/03	Water
535886DP	IDOLSTPW07FREP	07/22/03	Water
535887	IDOLSTPW07100	07/22/03	Water
535888	IDOLSTPW07100F	07/22/03	Water
535889	IDOLSTSFW07	07/22/03	Water
535889MS	IDOLSTSFW07MS	07/22/03	Water
535889DP	IDOLSTSFW07REP	07/22/03	Water
535890	IDOLSTSFW07F	07/22/03	Water
535890MS	IDOLSTSFW07FMS	07/22/03	Water
535890DP	IDOLSTSFW07REP	07/22/03	Water
535891	IDOLSTSFW07100	07/22/03	Water
535892	IDOLSTSFW07100F	07/22/03	Water

Severn Trent Laboratories, Inc.

STL Burlington • 208 South Park Drive, Suite 1, Colchester, VT 05446

Tel 802 655 1203 Fax 802 655 1248 • www.stl-inc.com

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Sample Date</u>	<u>Sample Matrix</u>
Received: 07/26/03 ETR No: 95017			
535917	IDOLADSF12	07/22/03	Water
535918	IDOLADSF12F	07/22/03	Water
535919	IDOLPDSFW13	07/22/03	Water
535920	IDOLPDSFW13F	07/22/03	Water
535921	IDOLSTPW05	07/22/03	Water
535922	IDOLSTPW05F	07/22/03	Water
535923	IDOLSTSFW05	07/22/03	Water
535924	IDOLSTSFW05F	07/22/03	Water

Documentation that identifies the condition of the samples at the time of sample receipt and the issues arising at the time of sample login is included in the Sample Handling section of this submittal.

Due to software limitations some of the sample identifications have been truncated on the laboratory results. The entire sample identification will appear in the electronic deliverable.

Due to a laboratory error, no preserved aliquot was provided for the hardness determination for the following samples: IDOLSTPW06, IDOLSTPW07 and IDOLSTPW07100. The laboratory sub sampled the unpreserved fraction and acidified it with nitric acid.

This narrative identifies anomalies that occurred during the analyses of samples in this delivery group. If there is no description following regarding a certain methodology requested on the chain-of-custody record, then there were no exceptions to the laboratory quality control criteria noted during that analysis.

Metals by 6010B:

The spike recovery for the sample designated IDOLSTSFW07F yielded a percent recovery for selenium (68.2%) marginally below the established control limits for selenium.

The blank spike sample designated LCSW0808E yielded a percent recovery for silver (78.6%) slightly below the established control limits.

Mercury by 7470A:

The preparation blanks for the samples analyzed on 08/08/03 were inadvertently prepared at a concentration of 1.0 ppb instead of 5.0 ppb. The associated forms have been adjusted accordingly to reflect the actual concentration prepared.

Sulfate by 375.4:

The matrix spike analysis of the sample designated IDOLSTPW07 yielded a percent recovery (68%) marginally below the established control limits.

The samples designated IDOLPDSFW14, IDOLSTSFW06 and IDOLSTPW06 was accomplished 1 day beyond the prescribed holding time due to an error in the laboratory.

Total Dissolved Solids by 160.1:

The analysis of the sample designated IDOLSTSFW05 was accomplished outside of the prescribed holding time due to an error in the laboratory.

The samples designated IDOLPDSFW14, IDOLSTSFW06 and IDOLSTPW06 was accomplished 1 day beyond the prescribed holding time due to an error in the laboratory.

Volatile Solids by 160.4:

The samples designated IDOLPDSFW14, IDOLSTSFW06 and IDOLSTPW06 was accomplished 1 day beyond the prescribed holding time due to an error in the laboratory.

If there are any questions regarding this submittal, please contact Jeannine McCrumb at (802) 655-1203.

This report shall not be reproduced, except in full, without the written approval of the laboratory. This report is sequentially numbered starting with page 0001 and ending with page 0542.

I certify that this package is in compliance with the NELAC requirements, both technically and for completeness, for other than the conditions detailed above. The Laboratory Director or his designee, as verified by the following signature, has authorized the release of the data contained in this hardcopy data package.

Sincerely,

A handwritten signature in cursive script, appearing to read "Michael F. Wheeler", followed by a horizontal line.

Michael F. Wheeler, Ph.D.
Laboratory Director

Enclosure
MFW/jtw/cja

0001-C LAST ALPHA

CHAIN OF CUSTODY RECORD


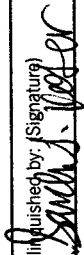
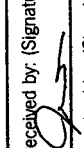
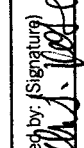
Report to: Company: <u>EA ENGINEERING</u> Address: <u>12011 BELLEVUE - RICHMOND RD.</u> <u>BELLEVUE, WA 98005</u> Contact: <u>CATHY BOWLE</u> Phone: <u>425-451-7400 X144</u> Fax: <u>425-451-7800</u> Contract/ Quote: <u>IDOL CITY MINE</u>		Invoice to: Company: <u>SAME</u> Address: _____ Contact: _____ Phone: _____ Fax: _____		Analysis Requested AT SP. COND., HARDNESS, CARBONATE, pH, SULFATE TDS - organic/inorganic TDS Total THL metals DISOLVED THL metals CN		Lab Use Only Due Date: _____ Temp. of coolers when received (C°): 1 2 3 4 5 Custody Seal N / Y Intact N / Y Screened For Radioactivity <input type="checkbox"/>	
Project Name 1289.08-0002 Idol city mine		Sampler's Signature <u>Sandra S. Koser</u>		Project Name Idol city mine		Sampler's Signature <u>Sandra S. Koser</u>	
Matrix W 12/10/03 1240 I 12/10/03 1015 I 12/10/03 1030 V 12/10/03 1000		Identifying Marks of Sample(s) X IDOL-AD-SFW-12 I IDOL-PD-SFW-13 I IDOL- PD -ST-PN-05 V IDOL-ST-SFW-05		No/Type of Containers² VOA A/G 250 ml P/O 6 6 5 6		Lab/Sample ID (Lab Use Only)	
Relinquished by (Signature) <u>Sandra S. Koser</u>		Date 12/10/03		Time 0900		Received by (Signature) <u>[Signature]</u>	
Relinquished by (Signature) _____		Date _____		Time _____		Received by (Signature) _____	
Relinquished by (Signature) _____		Date _____		Time _____		Received by (Signature) _____	
Remarks Client's delivery of samples constitutes acceptance of Severn Trent Laboratories terms and conditions contained in the Price Schedule.		Date 7/18/03		Time 1045		Remarks Client's delivery of samples constitutes acceptance of Severn Trent Laboratories terms and conditions contained in the Price Schedule.	
Matrix WW - Wastewater VOA - 40 ml vial		W - Water A/G - Amber / Or Glass 1 Liter		S - Soil 250 ml - Glass wide mouth		L - Liquid A - Air bag C - Charcoal Tube P/O - Plastic or other	
Oil O - Oil		Sludge SL - Sludge		Charcoal Tube C - Charcoal Tube		Plastic or other P/O - Plastic or other	

**STL cannot accept verbal changes.
Please Fax written changes to
(802) 655-1248**

SEVERN
TRENT
STL
STL Burlington
208 South Park Drive, Suite 1
Colchester, VT 05446 Tel: 802 655 1203

CHAIN OF CUSTODY RECORD

[illegible]

Report to: Company: <u>EA ENGINEERING</u> Address: <u>12011 BELLEVUE REMONDS RD.</u> <u>BELLEVUE, WA 98005</u> Contact: <u>CATHY BOHLKE</u> Phone: <u>425-451-7400 X 144</u> Fax: <u>425-451-7800</u> Contract/Quote: <u>100L CITY MINE</u>		Invoice to: Company: <u>SAME</u> Address: _____ Contact: _____ Phone: _____ Fax: _____		Analyses Requested: pH, sp. and hardness, carbonyl, redox sulfate TDS TSS - organic/inorganic Total TAL metals (field filtrate) Dissolved TAL metals CN		Lab Use Only Due Date: _____ Temp. of coolers when received (C°): 1 2 3 4 5 Custody Seal N / Y Intact N / Y Screened For Radioactivity <input type="checkbox"/>	
Sampler's Name <u>SANDY T. VOSER</u>		Sampler's Signature 		No/Type of Containers: VOA A/G 1 Lt. 250 ml P/O 6 6 6 5 5 5		Lab/Sample ID (Lab Use Only)	
Project Name <u>138909-0002 Faircity Mine</u>		Identifying Marks of Sample(s) W 1021 1350 X 100L-ST-SFW-07 100L-ST-SFW-07-MS 100L-ST-SFW-07-100 100L-ST-SFW-07 100L-ST-SFW-07-MS 100L-ST-SFW-07-100					
Relinquished by: (Signature) 		Date <u>7/29/03</u>		Time <u>0900</u>		Received by: (Signature) 	
Relinquished by: (Signature) 		Date _____		Time _____		Received by: (Signature) _____	
Relinquished by: (Signature) _____		Date _____		Time _____		Received by: (Signature) _____	
Remarks Client's delivery of samples constitutes acceptance of Severn Trent Laboratories terms and conditions contained in the Price Schedule.		Date _____		Time _____		Received by: (Signature) _____	
Matrix WW - Wastewater VOA - 40 ml vial		Water W - Water A/G - Amber / Or Glass 1 Liter		Soil S - Soil 250 ml - Glass wide mouth		Liquid L - Liquid 250 ml - Glass wide mouth	
Air bag A - Air bag		Charcoal Tube C - Charcoal Tube		Sludge SL - Sludge		Oil O - Oil	

Custody Record

Client 12011 Bellevue - Redmond Rd.	Project Manager Cathy Doherty	Date 7/24/03	Chain of Custody Number 01525
Address Bellevue	Telephone Number (Area Code)/Fax Number (425) 451-7400	Lab Number	Page 1 of 1

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of
Bellevue	(425) 451-7400	Hand made Chick	

City	State	Zip Code	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)
Bellevue	WA	98005		Jeanine McCrumb	

[illegible][illegible]

Cooler <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temp: _____	Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown	Sample Disposal <input type="checkbox"/> Return To Client <input type="checkbox"/> Archive For _____ Months	Disposal By Lab <input type="checkbox"/> Disposal <input type="checkbox"/> Archive For _____ Months	(A fee may be assessed if samples are retained longer than 1 month)
---	--	--	--	---

Cooler <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temp: _____	Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown	Sample Disposal <input type="checkbox"/> Return To Client <input type="checkbox"/> Archive For _____ Months	Disposal By Lab <input type="checkbox"/> Disposal <input type="checkbox"/> Archive For _____ Months	(A fee may be assessed if samples are retained longer than 1 month)
---	--	--	--	---

Turn Around Time Required (business days)	QC Requirements (Specify)

turnaround time required business day. ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☐ Other

1. Received By		Date		Time	
1	Unlaminated Bv	25	25	25	25

7/25/03 0900

[illegible]

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3. Relinquished By	Date	Time	3. Received By	Date	Time

.....

[illegible]

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy



**Geotechnical Analysis
Sample Data Summary Package**

EASEAT SDG: IDW001

Sample Report Summary

IDOLPDSFW14

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	09/09/03		mV	1	10	159	

GEOTECHNICAL / GENERAL CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTSFW06

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535881

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	09/09/03		mV	1	10	160	

GEOTECHNICAL / GENERAL CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTPW06

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535883

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	09/09/03		mV	1	10	158	

GEOTECHNICAL / GENERAL CHEMISTRY

Duplicate Sample Report Summary

Client Sample No.

IDOLSTPW07REP

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535885DP

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	Sample Result Conc.	Sample Result Qual.	Duplicate Sample Result Conc.	Duplicate Sample Result Qual.	RPD*
QSOA	Redox Potential D1498	09/09/03		mV	157		155		1

* Control Limit for RPD is +/- 20%, unless otherwise specified.

GEOTECHNICAL / GENERAL CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTPW07

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535885

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	09/09/03		mV	1	10	157	

GEOTECHNICAL / GENERAL CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTPW07100

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535887

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	09/09/03		mV	1	10	155	

GEOTECHNICAL / GENERAL CHEMISTRY

Duplicate Sample Report Summary

Client Sample No.

IDOLSTSFW07REP

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535889DP

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	Sample Result		Duplicate Sample Result		RPD*
					Conc.	Qual.	Conc.	Qual.	
QSOA	Redox Potential D1498	09/09/03		mV	158		155		2

* Control Limit for RPD is +/- 20%, unless otherwise specified.

GEOTECHNICAL / GENERAL CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTSFW07

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535889

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	09/09/03		mV	1	10	158	

Sample Report Summary

IDOLSTSF07100

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	09/09/03		mV	1	10	155	

GEOTECHNICAL / GENERAL CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLADSF12

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535917

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	08/27/03		mV	1	10	145	

Sample Report Summary

IDOLPDSFW13

GEOTECHNICAL / GENERAL CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTPW05

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535921

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	08/27/03		mV	1	10	170	

Sample Report Summary

IDOLSTSFW05

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
QSOA	Redox Potential D1498	08/27/03		mV	1	10	169	



**Sample Data Summary Package
For Wet Chemistry**

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLPDSFW14

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535879

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	371	
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	220	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	318	
160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	4	2.0	79.2	
160.4	Volatile Suspended Solids	07/29/03		mg/L	1	5.0	23.6	
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	142	
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	142	
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	4	20.0	58.6	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	7.4	
QSIA	Hardness, Post preserved	08/08/03	BLKHA0808A	mg/L	1	2.0	224	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTSFW06

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535881

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	451	
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	272	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	295	
160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	1	0.56	19.8	
160.4	Volatile Suspended Solids	07/29/03		mg/L	1	5.0	5.0	U
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	254	
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	254	
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	2	10.0	18.1	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	7.4	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTPW06

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535883

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	423	
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	264	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	281	
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	232	
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	232	
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	2	10.0	19.1	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	7.2	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTPW07

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535885

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	399	U
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	216	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	275	
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	5.4	
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	177	
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	182	
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	2	10.0	44.9	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	8.0	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTPW07100

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535887

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	406	U
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	224	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	275	
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	6.4	
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	175	
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	181	
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	2	10.0	44.2	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	8.2	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTSFW07

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535889

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	400	
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	216	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	286	
160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	1	0.50	8.4	
160.4	Volatile Suspended Solids	07/29/03		mg/L	1	5.0	5.0	U
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	7.7	
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	175	
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	183	
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	2	10.0	43.0	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	8.2	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTSFW07100

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535891

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	401	
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	212	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	268	
160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	1	0.50	13.0	
160.4	Volatile Suspended Solids	07/29/03		mg/L	1	5.0	5.0	U
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	4.2	
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	177	
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	181	
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	2	10.0	46.3	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	8.2	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLADSF12

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535917

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	1150	
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	860	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	945	
160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	5	2.5	186	
160.4	Volatile Suspended Solids	07/29/03		mg/L	1	5.0	18.5	
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	341	
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	341	
375.4	Sulfate	08/13/03	BLKSU0813A	mg/L	50	250	391	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	7.5	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLPDSFW13

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535919

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	403	
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	460	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	283	
160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	2	1.0	22.8	
160.4	Volatile Suspended Solids	07/29/03		mg/L	1	5.0	5.0	U
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	1.0	U
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	145	
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	1	1.0	145	
375.4	Sulfate	08/13/03	BLKSU0813A	mg/L	5	25.0	69.0	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	7.6	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTPW05

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVY

Case No.: 23046

Lab Sample ID: 535921

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	454	
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	580	
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	1	5.0	312	
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731B	mg/L	1	1.0	1.0	U
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731B	mg/L	1	1.0	1.0	U
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731B	mg/L	1	1.0	186	
310.1	Total Alkalinity	07/31/03	BLKAL0731B	mg/L	1	1.0	186	
375.4	Sulfate	08/13/03	BLKSU0813A	mg/L	5	25.0	58.8	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	7.3	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTSFW05

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535923

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
120.1	Conductivity (umhos/cm)	08/12/03		umhos/cm	1	0.000	210	
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	1	2.0	500	
160.1	Total Dissolved Solids	09/02/03	BLKDS0902A	mg/L	1	5.0	300	
160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	8	4.2	236	
160.4	Volatile Suspended Solids	07/29/03		mg/L	1	5.0	25.8	
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731B	mg/L	1	1.0	1.0	U
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731B	mg/L	1	1.0	1.0	U
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731B	mg/L	1	1.0	192	
310.1	Total Alkalinity	07/31/03	BLKAL0731B	mg/L	1	1.0	192	
375.4	Sulfate	08/13/03	BLKSU0813A	mg/L	5	25.0	126	
9040B	Corrosivity by pH	07/28/03		pH Units	1	0.000	7.4	

WET CHEMISTRY

Method Blank Report Summary

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Matrix: WATER

Client: EASEAT

% Solids:

Lab Sample ID	Method	Parameter	Conc.	Units	Qual.	DF	RL	Analytical Run Date	Analytical Batch
BLKAL0731A	310.1	Hydroxide Alkalinity	1.0	mg/L	U	1	1.0	07/31/03	BLKAL0731A
BLKAL0731A	310.1	Carbonate Alkalinity	1.0	mg/L	U	1	1.0	07/31/03	BLKAL0731A
BLKAL0731A	310.1	Bicarbonate Alkalinity	1.0	mg/L	U	1	1.0	07/31/03	BLKAL0731A
BLKAL0731A	310.1	Total Alkalinity	1.0	mg/L	U	1	1.0	07/31/03	BLKAL0731A
BLKAL0731B	310.1	Hydroxide Alkalinity	1.0	mg/L	U	1	1.0	07/31/03	BLKAL0731B
BLKAL0731B	310.1	Carbonate Alkalinity	1.0	mg/L	U	1	1.0	07/31/03	BLKAL0731B
BLKAL0731B	310.1	Bicarbonate Alkalinity	1.0	mg/L	U	1	1.0	07/31/03	BLKAL0731B
BLKAL0731B	310.1	Total Alkalinity	1.0	mg/L	U	1	1.0	07/31/03	BLKAL0731B
BLKDS0729B	160.1	Total Dissolved Solids	5.0	mg/L	U	1	5.0	07/29/03	BLKDS0729B
BLKDS0902A	160.1	Total Dissolved Solids	5.0	mg/L	U	1	5.0	09/02/03	BLKDS0902A
BLKHA0808A	130.2	Total Hardness as CaCO3	2.0	mg/L	U	1	2.0	08/08/03	BLKHA0808A
BLKSS0729A	160.2	Total Suspended Solids	0.50	mg/L	U	1	0.50	07/29/03	BLKSS0729A
BLKSU0813A	375.4	Sulfate	5.0	mg/L	U	1	5.0	08/13/03	BLKSU0813A
BLKSU0819A	375.4	Sulfate	5.0	mg/L	U	1	5.0	08/19/03	BLKSU0819A

WET CHEMISTRY

Matrix Spike Sample Report Summary

Client Sample No.

IDOLSTPW07MS

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLV

Case No.: 23046

Lab Sample ID: 535885MS

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	Matrix Spike Result Conc. Qual.	Sample Result Conc. Qual.	Spike Added	% Recovery*
130.2	Total Hardness as CaCO ₃	08/08/03	BLKHA0808A	mg/L	530	216	302.5	103.8
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	240	182	54.7	106.0
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	72.2	44.9	40.0	68.2

* Control Limit for Percent Recovery is 75-125%, unless otherwise specified.

Printed on: 09/11/03 09:02 AM

WET CHEMISTRY

Duplicate Sample Report Summary

Client Sample No.

IDOLSTPW07REP

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535885DP

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	Sample Result Conc.	Qual.	Duplicate Sample Result Conc.	Qual.	RPD*
120.1	Conductivity (umhos/cm)	08/12/03		umhos/c	399		402		1
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	216		220		2
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	275		276		0
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1.0	U	1.0	U	0
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	5.4		7.1		27
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	177		176		1
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	182		183		1
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	44.9		46.2		3
9040B	Corrosivity by pH	07/28/03		pH Units	8.0		8.1		1

* Control Limit for RPD is +/- 20%, unless otherwise specified.

WET CHEMISTRY

Duplicate Sample Report Summary

Client Sample No.

IDOLSTSFW07REP

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535889DP

Matrix: WATER

Client: EASEAT

Date Received: 07/26/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	Sample Result Conc.	Qual.	Duplicate Sample Result Conc.	Qual.	RPD*
120.1	Conductivity (umhos/cm)	08/12/03		umhos/c	400		396		1
130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	216		216		0
160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	286		285		0
160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	8.4		8.4		0
160.4	Volatile Suspended Solids	07/29/03		mg/L	5.0	U	5.0	U	0
310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	1.0	U	1.0	U	0
310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	7.7		8.1		5
310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	175		175		0
310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	183		183		0
375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	43.0		47.2		9
9040B	Corrosivity by pH	07/28/03		pH Units	8.2		8.2		0

* Control Limit for RPD is +/- 20%, unless otherwise specified.

WET CHEMISTRY

Laboratory Control Sample Report Summary

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVLT

Case No.: 23046

Matrix: WATER

Client: EASEAT

% Solids:

Lab Sample ID	Method	Parameter	Analytical Run Date	Analytical Batch	Units	LCS Conc.	True Value	% Recovery*
LCS DS0729B	160.1	Total Dissolved Solids	07/29/03	BLKDS0729B	mg/L	50.0	50.0	100.0
LCS DS0902A	160.1	Total Dissolved Solids	09/02/03	BLKDS0902A	mg/L	51.0	50.0	102.0
LCSAL0731A	310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731A	mg/L	58.5	54.7000	107.0
LCSAL0731A	310.1	Carbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	58.5	54.7000	107.0
LCSAL0731A	310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731A	mg/L	58.5	54.7000	107.0
LCSAL0731A	310.1	Total Alkalinity	07/31/03	BLKAL0731A	mg/L	58.5	54.7000	107.0
LCSAL0731B	310.1	Hydroxide Alkalinity	07/31/03	BLKAL0731B	mg/L	56.4	54.7000	103.1
LCSAL0731B	310.1	Carbonate Alkalinity	07/31/03	BLKAL0731B	mg/L	56.4	54.7000	103.1
LCSAL0731B	310.1	Bicarbonate Alkalinity	07/31/03	BLKAL0731B	mg/L	56.4	54.7000	103.1
LCSAL0731B	310.1	Total Alkalinity	07/31/03	BLKAL0731B	mg/L	56.4	54.7000	103.1
LCSCD0812A	120.1	Conductivity (umhos/cm)	08/12/03		umhos/c	1000	997.0000	100.3
LCSHA0808A	130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	124	121.0000	102.5
LCSPH0728A	9040B	Corrosivity by pH	07/28/03		pH Units	6.0	6.0000	100.5
LCSSS0729A	160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	502	500	100.4
LCSSU0813A	375.4	Sulfate	08/13/03	BLKSU0813A	mg/L	9.2	10	92.0
LCSSU0819A	375.4	Sulfate	08/19/03	BLKSU0819A	mg/L	9.3	10.0	93.0

* Control Limit for Percent Recovery is 80-120%, unless otherwise specified.

WET CHEMISTRY

Laboratory Control Sample Duplicate Report Summary

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDW001

Lab Code: STLVT

Case No.: 23046

Matrix: WATER

Client: EASEAT

% Solids:

Lab Sample ID	Method	Parameter	Analytical Run Date	Analytical Batch	Units	LCSD Conc.	True Value	% Recovery*	RPD**
LCSD DS0902A	160.1	Total Dissolved Solids	09/02/03	BLKDS0902A	mg/L	51.0	50.0	102.0	0
LCSDHA0808A	130.2	Total Hardness as CaCO3	08/08/03	BLKHA0808A	mg/L	124	121.0000	102.5	0
LCSDPH0728A	9040B	Corrosivity by pH	07/28/03		pH Units	6.0	6.0000	100.3	0
LCSDSS0729A	160.2	Total Suspended Solids	07/29/03	BLKSS0729A	mg/L	498	500	99.6	1
LCSDSU0813A	375.4	Sulfate	08/13/03	BLKSU0813A	mg/L	9.3	10	93.0	1

* Control Limit for Percent Recovery is 80-120%, unless otherwise specified.

** Control Limit for RPD is +/- 20%, unless otherwise specified.



**Sample Data Summary Package
For Metals**

USEPA - CLP FORMS

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001SOW No.: ILM04.1

EPA Sample No.	Lab Sample ID.
IDOLADSEFW12	535917
IDOLADSEFW12F	535918
IDOLPDSEFW13	535919
IDOLPDSEFW13F	535920
IDOLPDSEFW14	535879
IDOLPDSEFW14F	535880
IDOLSTPW05	535921
IDOLSTPW05F	535922
IDOLSTPW06	535883
IDOLSTPW06F	535884
IDOLSTPW07	535885
IDOLSTPW07100	535887
IDOLSTPW07100F	535888
IDOLSTPW07D	535885DP
IDOLSTPW07F	535886
IDOLSTPW07FD	535886DP
IDOLSTPW07FS	535886MS
IDOLSTPW07S	535885MS
IDOLSTSFW05	535923
IDOLSTSFW05F	535924
IDOLSTSFW06	535881
IDOLSTSFW06F	535882
IDOLSTSFW07	535889
IDOLSTSFW07100	535891
IDOLSTSFW07100F	535892

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001SOW No.: ILM04.1

EPA Sample No.	Lab Sample ID.
<u>IDOLSTSEW07D</u>	<u>535889DP</u>
<u>IDOLSTSEW07D</u>	<u>535890DP</u>
<u>IDOLSTSEW07F</u>	<u>535890</u>
<u>IDOLSTSEW07FS</u>	<u>535890MS</u>
<u>IDOLSTSEW07S</u>	<u>535889MS</u>

Were ICP interelement corrections applied? Yes/No YESWere ICP background corrections applied? Yes/No YESIf yes-were raw data generated before
application of background corrections? Yes/No NOComments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLADSW12

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Matrix (soil/water): WATER Lab Sample ID: 535917

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1510			P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	399			P
7440-39-3	Barium	126	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	186000			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	6.1	B		P
7440-50-8	Copper	10.2	B		P
7439-89-6	Iron	37000			P
7439-92-1	Lead	3.3			P
7439-95-4	Magnesium	56200			P
7439-96-5	Manganese	1870			P
7439-97-6	Mercury	0.73			CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	3450	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	16500			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	4.3	B		P
7440-66-6	Zinc	25.6			P
57-12-5	Cyanide	10.0	U		AS

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLADSW12F

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Matrix (soil/water): WATER Lab Sample ID: 535918

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	32.5	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	41.7			P
7440-39-3	Barium	63.5	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	175000			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	2020			P
7439-92-1	Lead	1.3	U		P
7439-95-4	Magnesium	53800			P
7439-96-5	Manganese	941			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	3040	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	14600			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	6.2	B		P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLPDSFW13

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLab Sample ID: 535919Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	80.0	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	17.5			P
7440-39-3	Barium	82.1	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	53800			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	3.0	B		P
7439-89-6	Iron	421			P
7439-92-1	Lead	1.3	U		P
7439-95-4	Magnesium	15600			P
7439-96-5	Manganese	168			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	3200	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	10000			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	5.9	B		P
57-12-5	Cyanide	10.0	U		AS

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLPDSFW13F

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Matrix (soil/water): WATER Lab Sample ID: 535920

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	36.0	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	14.3			P
7440-39-3	Barium	78.9	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	53800			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	3.6	B		P
7439-89-6	Iron	178			P
7439-92-1	Lead	1.4	B		P
7439-95-4	Magnesium	15600			P
7439-96-5	Manganese	139			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	3200	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	12400			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	16.4	B		P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLPDSFW14

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLab Sample ID: 535879Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	473			P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	12.2			P
7440-39-3	Barium	111	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	2.2	B		P
7440-70-2	Calcium	49800			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	8.3	B		P
7439-89-6	Iron	2150			P
7439-92-1	Lead	40.4			P
7439-95-4	Magnesium	15300			P
7439-96-5	Manganese	167			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	4900	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	9620			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	170			P
57-12-5	Cyanide	10.0	U		AS

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLPDSFW14F

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLab Sample ID: 535880Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.6	U		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	83.9	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	47000			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	6.2	B		P
7439-89-6	Iron	214			P
7439-92-1	Lead	1.3	U		P
7439-95-4	Magnesium	15300			P
7439-96-5	Manganese	29.4			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	5320			P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	10400			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	41.8			P

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTFW05

Lab Name: STL BURLINGTON Contract: 23046
Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001
Matrix (soil/water): WATER Lab Sample ID: 535921
Level (low/med): LOW Date Received: 07/26/03
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTFW05F

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLab Sample ID: 535922Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	113	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	8.9	B		P
7440-39-3	Barium	108	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	1.6	B		P
7440-70-2	Calcium	64100			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	5.2	B		P
7439-89-6	Iron	415			P
7439-92-1	Lead	62.5			P
7439-95-4	Magnesium	16600			P
7439-96-5	Manganese	47.7			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	3570	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	9770			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	240			P

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTPW06

Lab Name: STL BURLINGTON Contract: 23046
Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001
Matrix (soil/water): WATER Lab Sample ID: 535883
Level (low/med): LOW Date Received: 07/26/03
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTPW06F

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Matrix (soil/water): WATER Lab Sample ID: 535884

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	38.6	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	6.3	B		P
7440-39-3	Barium	142	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	67800			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	2.6	B		P
7439-89-6	Iron	1820			P
7439-92-1	Lead	1.3	U		P
7439-95-4	Magnesium	16400			P
7439-96-5	Manganese	456			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	3560	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	8250			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	12.9	B		P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTPW07

Lab Name: STL BURLINGTON Contract: 23046
Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001
Matrix (soil/water): WATER Lab Sample ID: 535885
Level (low/med): LOW Date Received: 07/26/03
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTPW07100

Lab Name: STL BURLINGTON Contract: 23046
Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001
Matrix (soil/water): WATER Lab Sample ID: 535887
Level (low/med): LOW Date Received: 07/26/03
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
57-12-5	Cyanide	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTPW07100F

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Matrix (soil/water): WATER Lab Sample ID: 535888

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	44.4	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	123	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	60900			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	88.4	B		P
7439-92-1	Lead	1.6	B		P
7439-95-4	Magnesium	14400			P
7439-96-5	Manganese	5.2	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	2970	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	10400			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	5.8	B		P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTPW07F

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLab Sample ID: 535886Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	30.9	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	125	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	62100			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	65.6	B		P
7439-92-1	Lead	1.5	B		P
7439-95-4	Magnesium	14700			P
7439-96-5	Manganese	29.9			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	2940	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	10200			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	11.6	B		P

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSFW05

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Matrix (soil/water): WATER Lab Sample ID: 535923

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3940			P
7440-36-0	Antimony	5.8	B		P
7440-38-2	Arsenic	61.2			P
7440-39-3	Barium	369			P
7440-41-7	Beryllium	0.58	B		P
7440-43-9	Cadmium	17.2			P
7440-70-2	Calcium	73300			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	11.1	B		P
7440-50-8	Copper	97.3			P
7439-89-6	Iron	10900			P
7439-92-1	Lead	1540			P
7439-95-4	Magnesium	18400			P
7439-96-5	Manganese	2440			P
7439-97-6	Mercury	0.44			CV
7440-02-0	Nickel	9.7	B		P
7440-09-7	Potassium	4880	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	10100			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	11.7	B		P
7440-66-6	Zinc	1550			P
57-12-5	Cyanide	10.0	U		AS

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSFW05F

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Matrix (soil/water): WATER Lab Sample ID: 535924

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	26.4	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	8.3	B		P
7440-39-3	Barium	113	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	1.2	B		P
7440-70-2	Calcium	64500			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	3.5	B		P
7439-89-6	Iron	87.0	B		P
7439-92-1	Lead	4.5			P
7439-95-4	Magnesium	16500			P
7439-96-5	Manganese	100			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	3950	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	9900			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	162			P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSFW06

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Matrix (soil/water): WATER Lab Sample ID: 535881

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	448			P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	186	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.67	B		P
7440-70-2	Calcium	72200			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	4.9	B		P
7439-89-6	Iron	572			P
7439-92-1	Lead	11.1			P
7439-95-4	Magnesium	17300			P
7439-96-5	Manganese	57.5			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	3410	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	7190			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	39.7			P
57-12-5	Cyanide	10.0	U		AS

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSFW06F

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLab Sample ID: 535882Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.6	U		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	157	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	72100			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	3.6	B		P
7439-89-6	Iron	73.5	B		P
7439-92-1	Lead	1.3	U		P
7439-95-4	Magnesium	17500			P
7439-96-5	Manganese	0.70	U		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	3120	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	7630			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	13.4	B		P

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSFW07

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLab Sample ID: 535889Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	91.7	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	121	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	60800			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	168			P
7439-92-1	Lead	1.3	U		P
7439-95-4	Magnesium	14400			P
7439-96-5	Manganese	9.3	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	2840	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	10000			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	4.7	B		P
57-12-5	Cyanide	10.0	U		AS

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSFW07100

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLab Sample ID: 535891Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	59.2	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	119	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	59900			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	120			P
7439-92-1	Lead	1.3	U		P
7439-95-4	Magnesium	14200			P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	2860	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	10100			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	1.9	B		P
57-12-5	Cyanide	10.0	U		AS

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSFW07100F

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLab Sample ID: 535892Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	58.3	B		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	5.2	B		P
7440-39-3	Barium	120	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	60000			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	2.6	B		P
7439-89-6	Iron	118			P
7439-92-1	Lead	1.3	U		P
7439-95-4	Magnesium	14200			P
7439-96-5	Manganese	5.7	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	2860	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	10000			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	3.4	B		P

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSFW07F

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Matrix (soil/water): WATER Lab Sample ID: 535890

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.6	U		P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	122	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	62300			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	55.6	B		P
7439-92-1	Lead	1.3	U		P
7439-95-4	Magnesium	14800			P
7439-96-5	Manganese	0.70	U		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	2950	B		P
7782-49-2	Selenium	3.4	U	N	P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	10300			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	4.4	B		P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide	120.0	125.68	104.7	150.0	150.32	100.2	150.08	100.1	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide				150.0	150.68	100.5	150.68	100.5	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide	120.0	129.20	107.7	150.0	148.90	99.3	147.60	98.4	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide				150.0	149.50	99.7	151.17	100.8	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	26000.0	25900.00	99.6	30200.0	29940.00	99.1	30350.00	100.5	P
Antimony	250.0	249.00	99.6	300.0	300.50	100.2	305.30	101.8	P
Arsenic	250.0	249.20	99.7	100.0	100.60	100.6	99.55	99.6	P
Barium	500.0	494.90	99.0	200.0	198.70	99.4	201.80	100.9	P
Beryllium	500.0	503.50	100.7	100.0	98.69	98.7	100.10	100.1	P
Cadmium	500.0	492.40	98.5	100.0	98.42	98.4	99.34	99.3	P
Calcium	25000.0	25210.00	100.8	30200.0	30020.00	99.4	30270.00	100.2	P
Chromium	500.0	499.30	99.9	200.0	197.30	98.6	199.10	99.6	P
Cobalt	500.0	491.50	98.3	200.0	196.60	98.3	199.00	99.5	P
Copper	500.0	503.00	100.6	200.0	202.50	101.2	205.30	102.6	P
Iron	25500.0	26000.00	102.0	30200.0	29940.00	99.1	30290.00	100.3	P
Lead	1000.0	1003.00	100.3	400.0	393.30	98.3	399.50	99.9	P
Magnesium	25000.0	25150.00	100.6	30200.0	29770.00	98.6	30110.00	99.7	P
Manganese	500.0	487.50	97.5	200.0	189.50	94.8	192.00	96.0	P
Nickel	500.0	496.20	99.2	200.0	196.70	98.4	199.40	99.7	P
Potassium	25000.0	25780.00	103.1	30200.0	30940.00	102.5	31410.00	104.0	P
Selenium	250.0	243.90	97.6	100.0	99.63	99.6	101.30	101.3	P
Silver	500.0	498.60	99.7	100.0	99.80	99.8	101.90	101.9	P
Sodium	25000.0	24610.00	98.4	30200.0	28990.00	96.0	29220.00	96.8	P
Thallium	250.0	239.00	95.6	100.0	103.80	103.8	104.20	104.2	P
Vanadium	500.0	495.90	99.2	200.0	197.60	98.8	200.10	100.0	P
Zinc	500.0	501.20	100.2	200.0	200.40	100.2	203.60	101.8	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	30400.00	100.7	30190.00	100.0	P
Antimony				300.0	303.30	101.1	305.80	101.9	P
Arsenic				100.0	102.70	102.7	99.42	99.4	P
Barium				200.0	202.10	101.0	200.60	100.3	P
Beryllium				100.0	99.70	99.7	99.80	99.8	P
Cadmium				100.0	98.30	98.3	98.50	98.5	P
Calcium				30200.0	30060.00	99.5	30130.00	99.8	P
Chromium				200.0	198.50	99.2	198.20	99.1	P
Cobalt				200.0	198.60	99.3	198.30	99.2	P
Copper				200.0	205.30	102.6	204.00	102.0	P
Iron				30200.0	30120.00	99.7	30110.00	99.7	P
Lead				400.0	396.30	99.1	396.40	99.1	P
Magnesium				30200.0	29920.00	99.1	29950.00	99.2	P
Manganese				200.0	191.70	95.8	191.40	95.7	P
Nickel				200.0	198.10	99.0	197.70	98.8	P
Potassium				30200.0	31530.00	104.4	31320.00	103.7	P
Selenium				100.0	96.38	96.4	100.60	100.6	P
Silver				100.0	102.40	102.4	101.30	101.3	P
Sodium				30200.0	29630.00	98.1	29390.00	97.3	P
Thallium				100.0	104.70	104.7	101.40	101.4	P
Vanadium				200.0	199.80	99.9	199.70	99.8	P
Zinc				200.0	202.50	101.2	202.40	101.2	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	30540.00	101.1			P
Antimony				300.0	305.70	101.9			P
Arsenic				100.0	101.80	101.8			P
Barium				200.0	202.10	101.0			P
Beryllium				100.0	99.81	99.8			P
Cadmium				100.0	98.65	98.6			P
Calcium				30200.0	30230.00	100.1			P
Chromium				200.0	199.30	99.6			P
Cobalt				200.0	199.00	99.5			P
Copper				200.0	205.90	103.0			P
Iron				30200.0	30210.00	100.0			P
Lead				400.0	399.30	99.8			P
Magnesium				30200.0	30020.00	99.4			P
Manganese				200.0	191.90	96.0			P
Nickel				200.0	198.60	99.3			P
Potassium				30200.0	31440.00	104.1			P
Selenium				100.0	99.48	99.5			P
Silver				100.0	102.00	102.0			P
Sodium				30200.0	29710.00	98.4			P
Thallium				100.0	104.20	104.2			P
Vanadium				200.0	200.40	100.2			P
Zinc				200.0	202.70	101.4			P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.90	96.7	5.0	4.86	97.2	4.67	93.4	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	4.40	88.0	4.74	94.8	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration				M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)
Mercury	3.0	2.98	99.3	5.0	4.92	98.4	4.43	88.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	4.36	87.2			CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.89	96.3	1.0	0.89	89.0	0.82	82.0	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				1.0	0.84	84.0	0.97	97.0	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				1.0	0.90	90.0			CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum				400.0	545.20	136.3	572.50	143.1
Antimony				120.0	122.50	102.1	124.60	103.8
Arsenic				20.0	18.84	94.2	18.28	91.4
Barium				400.0	398.60	99.6	403.50	100.9
Beryllium				10.0	10.06	100.6	10.04	100.4
Cadmium				10.0	10.41	104.1	10.63	106.3
Calcium				10000.0	10510.00	105.1	10600.00	106.0
Chromium				20.0	20.90	104.5	21.52	107.6
Cobalt				100.0	97.62	97.6	98.77	98.8
Copper				50.0	51.64	103.3	52.60	105.2
Iron				200.0	294.60	147.3	313.00	156.5
Lead				6.0	4.93	82.2	4.60	76.7
Magnesium				10000.0	10290.00	102.9	10400.00	104.0
Manganese				30.0	17.31	57.7	17.68	58.9
Nickel				80.0	79.88	99.8	80.57	100.7
Potassium				10000.0	11650.00	116.5	11800.00	118.0
Selenium				10.0	6.97	69.7	10.23	102.3
Silver				20.0	20.70	103.5	21.28	106.4
Sodium				10000.0	9774.00	97.7	9700.00	97.0
Thallium				20.0	21.72	108.6	25.17	125.8
Vanadium				100.0	98.25	98.2	100.10	100.1
Zinc				40.0	40.78	102.0	41.51	103.8

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial		Final		
				True	Found	%R	Found	%R
Mercury	0.2	0.17	85.0					

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP			
	True	Found	%R	Initial True	Final Found	%R	%R
Mercury	0.2	0.24	120.0				

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury	0.2	0.22	110.0					

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Cyanide			10.0	U							AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)				Preparation Blank	C	M
			1	C	2	C	3	C	
Cyanide			10.0	U					AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank		M
			1	C	2	C	3	C		C	
Aluminum	23.6	U	23.6	U	24.4	B	23.6	U	30.930	B	P
Antimony	4.7	U	4.7	U	4.7	U	4.7	U	4.700	U	P
Arsenic	4.8	U	4.8	U	4.8	U	4.8	U	4.800	U	P
Barium	5.9	U	5.9	U	5.9	U	5.9	U	5.900	U	P
Beryllium	0.2	U	0.2	U	0.2	U	0.2	U	0.200	U	P
Cadmium	0.7	B	0.6	U	0.6	U	0.6	U	0.600	U	P
Calcium	182.1	U	182.1	U	182.1	U	182.1	U	182.100	U	P
Chromium	1.4	U	1.4	U	1.4	U	1.4	U	1.400	U	P
Cobalt	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	P
Copper	2.4	U	2.4	U	2.4	U	2.4	U	2.400	U	P
Iron	33.3	U	33.8	B	33.3	U	33.3	U	40.710	B	P
Lead	1.3	U	-1.6	B	1.3	U	1.3	U	1.300	U	P
Magnesium	178.3	U	178.3	U	178.3	U	178.3	U	178.300	U	P
Manganese	-12.8	B	-12.9	B	-12.8	B	-12.9	B	-12.920	B	P
Nickel	2.1	U	2.1	U	2.1	U	2.1	U	2.100	U	P
Potassium	393.0	U	393.0	U	393.0	U	393.0	U	393.000	U	P
Selenium	3.4	U	3.4	U	3.4	U	3.4	U	3.400	U	P
Silver	2.2	U	2.2	U	2.2	U	2.2	U	2.200	U	P
Sodium	472.7	U	472.7	U	472.7	U	472.7	U	472.700	U	P
Thallium	5.7	U	5.7	U	5.7	U	5.7	U	5.700	U	P
Vanadium	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	P
Zinc	1.0	U	1.0	U	1.0	U	1.0	U	9.207	B	P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Aluminum			23.6	U	23.6	U					P
Antimony			4.7	U	4.7	U					P
Arsenic			4.8	U	4.8	U					P
Barium			5.9	U	5.9	U					P
Beryllium			0.2	U	0.2	U					P
Cadmium			0.6	U	0.6	U					P
Calcium			182.1	U	182.1	U					P
Chromium			1.4	U	1.4	U					P
Cobalt			2.0	U	2.0	U					P
Copper			2.4	U	2.4	U					P
Iron			40.4	B	33.3	U					P
Lead			1.3	U	1.3	U					P
Magnesium			178.3	U	178.3	U					P
Manganese			-12.8	B	-12.8	B					P
Nickel			2.1	U	2.1	U					P
Potassium			393.0	U	393.0	U					P
Selenium			3.4	U	3.4	U					P
Silver			2.2	U	2.2	U					P
Sodium			472.7	U	472.7	U					P
Thallium			5.7	U	5.7	U					P
Vanadium			2.0	U	2.0	U					P
Zinc			1.0	U	1.0	U					P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.100	U	CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury			0.1	U							CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury	0.1	U	0.1	U	0.1	U	0.1	U			CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.100	U	CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury			0.1	U	0.1	U					CV

USEPA - CLP FORMS

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001ICP ID Number: TJA ICAP 4 ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	482740	492500	489000.0	101.3	492800	485800.0	100.6
Antimony	0	596	-2	604.7	101.5	-1	599.1	100.5
Arsenic	0	102	6	107.0	104.9	7	104.5	102.5
Barium	0	503	2	493.5	98.1	2	491.2	97.7
Beryllium	0	482	0	477.3	99.0	0	475.0	98.5
Cadmium	0	938	1	922.7	98.4	1	909.0	96.9
Calcium	500000	477840	482800	484000.0	101.3	481500	478300.0	100.1
Chromium	0	483	3	472.3	97.8	3	469.0	97.1
Cobalt	0	457	-1	452.4	99.0	-1	449.0	98.2
Copper	0	526	4	509.3	96.8	4	508.0	96.6
Iron	200000	191980	197900	195800.0	102.0	197300	193900.0	101.0
Lead	0	49	-1	44.1	90.0	0	44.0	89.8
Magnesium	500000	521880	530800	532800.0	102.1	529300	527400.0	101.1
Manganese	0	474	-12	458.6	96.8	-12	455.6	96.1
Nickel	0	952	1	939.6	98.7	1	932.0	97.9
Potassium	0	0	-3	22.8		-35	-48.0	
Selenium	0	47	-3	50.5	107.4	1	49.8	106.0
Silver	0	213	1	211.4	99.2	1	210.9	99.0
Sodium	0	0	-273	-263.9		-279	-296.8	
Thallium	0	89	2	90.7	101.9	-1	86.1	96.7
Vanadium	0	478	1	463.0	96.9	1	460.7	96.4
Zinc	0	998	5	1010.0	101.2	5	1003.0	100.5

USEPA - CLP FORMS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLSTPW07S

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLYT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Matrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Cyanide	75 - 125	108.0743	10.0000 U	100.00	108.1		AS

Comments:

USEPA - CLP FORMS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLSTPW07FS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Matrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2073.0000		30.8700	B	2000.00	102.1		P
Antimony	75 - 125	511.8000		4.7000	U	500.00	102.4		P
Arsenic	75 - 125	39.8700		4.8000	U	40.00	99.7		P
Barium	75 - 125	2084.0000		125.2000	B	2000.00	97.9		P
Beryllium	75 - 125	50.1200		0.2000	U	50.00	100.2		P
Cadmium	75 - 125	49.9500		0.6000	U	50.00	99.9		P
Chromium	75 - 125	202.5000		1.4000	U	200.00	101.2		P
Cobalt	75 - 125	492.4000		2.0000	U	500.00	98.5		P
Copper	75 - 125	259.6000		2.4000	U	250.00	103.8		P
Iron	75 - 125	1095.0000		65.6300	B	1000.00	102.9		P
Lead	75 - 125	19.8300		1.4850	B	20.00	91.7		P
Manganese	75 - 125	537.9000		29.9000		500.00	101.6		P
Mercury	75 - 125	0.9170		0.1000	U	1.00	91.7		CV
Nickel	75 - 125	496.8000		2.1000	U	500.00	99.4		P
Selenium	75 - 125	9.8300		3.4000	U	10.00	98.3		P
Silver	75 - 125	50.1400		2.2000	U	50.00	100.3		P
Thallium	75 - 125	47.9900		5.7000	U	50.00	96.0		P
Vanadium	75 - 125	505.5000		2.0000	U	500.00	101.1		P
Zinc	75 - 125	515.7000		11.5500	B	500.00	100.8		P

Comments:

USEPA - CLP FORMS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLSTSFW07S

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Matrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2106.0000	91.6900 B	2000.00	100.7		P
Antimony	75 - 125	505.9000	4.7000 U	500.00	101.2		P
Arsenic	75 - 125	41.6900	4.8000 U	40.00	104.2		P
Barium	75 - 125	2056.0000	121.4000 B	2000.00	96.7		P
Beryllium	75 - 125	49.2000	0.2000 U	50.00	98.4		P
Cadmium	75 - 125	49.2100	0.6000 U	50.00	98.4		P
Chromium	75 - 125	199.7000	1.4000 U	200.00	99.8		P
Cobalt	75 - 125	484.8000	2.0000 U	500.00	97.0		P
Copper	75 - 125	257.0000	2.4000 U	250.00	102.8		P
Iron	75 - 125	1166.0000	168.5000	1000.00	99.8		P
Lead	75 - 125	18.3600	1.3000 U	20.00	91.8		P
Manganese	75 - 125	509.8000	9.2720 B	500.00	100.1		P
Mercury	75 - 125	0.9640	0.1000 U	1.00	96.4		CV
Nickel	75 - 125	487.9000	2.1000 U	500.00	97.6		P
Selenium	75 - 125	8.8300	3.4000 U	10.00	88.3		P
Silver	75 - 125	51.1500	2.2000 U	50.00	102.3		P
Thallium	75 - 125	43.1300	5.7000 U	50.00	86.3		P
Vanadium	75 - 125	498.0000	2.0000 U	500.00	99.6		P
Zinc	75 - 125	504.3000	4.6620 B	500.00	99.9		P
Cyanide	75 - 125	108.7437	10.0000 U	100.00	108.7		AS

Comments:

USEPA - CLP FORMS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLSTSFW07FS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Matrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	1996.0000		23.6000	U	2000.00	99.8		P
Antimony	75 - 125	497.1000		4.7000	U	500.00	99.4		P
Arsenic	75 - 125	39.0100		4.8000	U	40.00	97.5		P
Barium	75 - 125	2032.0000		122.1000	B	2000.00	95.5		P
Beryllium	75 - 125	49.0100		0.2000	U	50.00	98.0		P
Cadmium	75 - 125	48.6000		0.6000	U	50.00	97.2		P
Chromium	75 - 125	197.7000		1.4000	U	200.00	98.8		P
Cobalt	75 - 125	481.1000		2.0000	U	500.00	96.2		P
Copper	75 - 125	252.9000		2.4000	U	250.00	101.2		P
Iron	75 - 125	1054.0000		55.6200	B	1000.00	99.8		P
Lead	75 - 125	17.9200		1.3000	U	20.00	89.6		P
Manganese	75 - 125	495.6000		0.7000	U	500.00	99.1		P
Mercury	75 - 125	0.9400		0.1000	U	1.00	94.0		CV
Nickel	75 - 125	485.9000		2.1000	U	500.00	97.2		P
Selenium	75 - 125	6.8160		3.4000	U	10.00	68.2	N	P
Silver	75 - 125	50.5100		2.2000	U	50.00	101.0		P
Thallium	75 - 125	47.1000		5.7000	U	50.00	94.2		P
Vanadium	75 - 125	493.5000		2.0000	U	500.00	98.7		P
Zinc	75 - 125	500.5000		4.4110	B	500.00	99.2		P

Comments:

USEPA - CLP FORMS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLSTPW07FA

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS

SDG No.: IDW001Matrix (soil/water): WATERLevel (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		2295.00		30.87	B	2000.0	113.2		P
Antimony		557.90		4.70	U	500.0	111.6		P
Arsenic		41.84		4.80	U	40.0	104.6		P
Barium		2284.00		125.20	B	2000.0	107.9		P
Beryllium		55.26		0.20	U	50.0	110.5		P
Cadmium		54.97		0.60	U	50.0	109.9		P
Chromium		222.50		1.40	U	200.0	111.2		P
Cobalt		541.20		2.00	U	500.0	108.2		P
Copper		286.10		2.40	U	250.0	114.4		P
Iron		1133.00		65.63	B	1000.0	106.7		P
Lead		21.76		1.48	B	20.0	101.4		P
Manganese		588.80		29.90		500.0	111.8		P
Nickel		546.40		2.10	U	500.0	109.3		P
Selenium		10.60		3.40	U	10.0	106.0		P
Silver		54.66		2.20	U	50.0	109.3		P
Thallium		52.23		5.70	U	50.0	104.5		P
Vanadium		557.40		2.00	U	500.0	111.5		P
Zinc		566.10		11.55	B	500.0	110.9		P

Comments:

USEPA - CLP FORMS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLSTSFW07A

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS

SDG No.: IDW001Matrix (soil/water): WATERLevel (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		2230.00		91.69	B	2000.0	106.9		P
Antimony		531.00		4.70	U	500.0	106.2		P
Arsenic		38.58		4.80	U	40.0	96.4		P
Barium		2160.00		121.40	B	2000.0	101.9		P
Beryllium		52.21		0.20	U	50.0	104.4		P
Cadmium		52.03		0.60	U	50.0	104.1		P
Chromium		210.90		1.40	U	200.0	105.4		P
Cobalt		513.50		2.00	U	500.0	102.7		P
Copper		270.60		2.40	U	250.0	108.2		P
Iron		1192.00		168.50		1000.0	102.4		P
Lead		19.67		1.30	U	20.0	98.4		P
Manganese		539.10		9.27	B	500.0	106.0		P
Nickel		517.30		2.10	U	500.0	103.5		P
Selenium		11.01		3.40	U	10.0	110.1		P
Silver		52.18		2.20	U	50.0	104.4		P
Thallium		49.82		5.70	U	50.0	99.6		P
Vanadium		526.30		2.00	U	500.0	105.3		P
Zinc		536.00		4.66	B	500.0	106.3		P
Cyanide		23.25		10.00	U	20.0	116.2		AS

Comments:

USEPA - CLP FORMS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLSTSFW07FA

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS

SDG No.: IDW001Matrix (soil/water): WATERLevel (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		2121.00		23.60	U	2000.0	106.0		P
Antimony		514.60		4.70	U	500.0	102.9		P
Arsenic		38.39		4.80	U	40.0	96.0		P
Barium		2100.00		122.10	B	2000.0	98.9		P
Beryllium		50.14		0.20	U	50.0	100.3		P
Cadmium		49.97		0.60	U	50.0	99.9		P
Chromium		202.90		1.40	U	200.0	101.4		P
Cobalt		493.40		2.00	U	500.0	98.7		P
Copper		262.60		2.40	U	250.0	105.0		P
Iron		1051.00		55.62	B	1000.0	99.5		P
Lead		18.17		1.30	U	20.0	90.8		P
Manganese		510.60		0.70	U	500.0	102.1		P
Nickel		497.80		2.10	U	500.0	99.6		P
Selenium		9.50		3.40	U	10.0	95.0		P
Silver		49.16		2.20	U	50.0	98.3		P
Thallium		47.35		5.70	U	50.0	94.7		P
Vanadium		508.10		2.00	U	500.0	101.6		P
Zinc		522.80		4.41	B	500.0	103.7		P

Comments:

USEPA - CLP FORMS

6

DUPLICATES

SAMPLE NO.

IDOLSTPW07D

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Matrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0 % Solids for Duplicate: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Cyanide		10.0000	U	10.0000	U			AS

USEPA - CLP FORMS

6

DUPLICATES

SAMPLE NO.

IDOLSTFW07FD

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Matrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0 % Solids for Duplicate: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		30.8700	B	24.4100	B	23.4		P
Antimony		4.7000	U	4.7000	U			P
Arsenic		4.8000	U	4.8000	U			P
Barium		125.2000	B	119.6000	B	4.6		P
Beryllium		0.2000	U	0.2000	U			P
Cadmium		0.6000	U	0.6000	U			P
Calcium		62060.0000		58820.0000		5.4		P
Chromium		1.4000	U	1.4000	U			P
Cobalt		2.0000	U	2.0000	U			P
Copper		2.4000	U	2.4000	U			P
Iron		65.6300	B	62.8100	B	4.4		P
Lead		1.4850	B	1.3000	U	200.0		P
Magnesium	5000.0	14700.0000		13980.0000		5.0		P
Manganese	15.0	29.9000		27.7200		7.6		P
Mercury		0.1000	U	0.1000	U			CV
Nickel		2.1000	U	2.1000	U			P
Potassium		2939.0000	B	2751.0000	B	6.6		P
Selenium		3.4000	U	3.4000	U			P
Silver		2.2000	U	2.2000	U			P
Sodium	5000.0	10200.0000		9893.0000		3.1		P
Thallium		5.7000	U	5.7000	U			P
Vanadium		2.0000	U	2.0000	U			P
Zinc		11.5500	B	3.3610	B	109.8		P

USEPA - CLP FORMS

6

DUPLICATES

SAMPLE NO.

IDOLSTSFW07D

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Matrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0 % Solids for Duplicate: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		91.6900	B	89.9100	B	2.0		P
Antimony		4.7000	U	4.7000	U			P
Arsenic		4.8000	U	4.8000	U			P
Barium		121.4000	B	122.0000	B	0.5		P
Beryllium		0.2000	U	0.2000	U			P
Cadmium		0.6000	U	0.6000	U			P
Calcium		60830.0000		61410.0000		0.9		P
Chromium		1.4000	U	1.4000	U			P
Cobalt		2.0000	U	2.0000	U			P
Copper		2.4000	U	2.4000	U			P
Iron	100.0	168.5000		185.3000		9.5		P
Lead		1.3000	U	1.3000	U			P
Magnesium	5000.0	14440.0000		14600.0000		1.1		P
Manganese		9.2720	B	9.4960	B	2.4		P
Mercury		0.1000	U	0.1000	U			CV
Nickel		2.1000	U	2.1000	U			P
Potassium		2844.0000	B	2880.0000	B	1.3		P
Selenium		3.4000	U	3.4000	U			P
Silver		2.2000	U	2.2000	U			P
Sodium	5000.0	10040.0000		10090.0000		0.5		P
Thallium		5.7000	U	5.7000	U			P
Vanadium		2.0000	U	2.0000	U			P
Zinc		4.6620	B	2.7860	B	50.4		P
Cyanide		10.0000	U	10.0000	U			AS

USEPA - CLP FORMS

6

DUPLICATES

SAMPLE NO.

IDOLSTSFW07D

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Matrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0 % Solids for Duplicate: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		23.6000	U	23.6000	U			P
Antimony		4.7000	U	4.7000	U			P
Arsenic		4.8000	U	4.8000	U			P
Barium		122.1000	B	118.0000	B	3.4		P
Beryllium		0.2000	U	0.2000	U			P
Cadmium		0.6000	U	0.6000	U			P
Calcium		62270.0000		59600.0000		4.4		P
Chromium		1.4000	U	1.4000	U			P
Cobalt		2.0000	U	2.0000	U			P
Copper		2.4000	U	2.4000	U			P
Iron		55.6200	B	51.9700	B	6.8		P
Lead		1.3000	U	1.3000	U			P
Magnesium	5000.0	14750.0000		14120.0000		4.4		P
Manganese		0.7000	U	0.7000	U			P
Mercury		0.1000	U	0.1000	U			CV
Nickel		2.1000	U	2.1000	U			P
Potassium		2949.0000	B	2795.0000	B	5.4		P
Selenium		3.4000	U	3.4000	U			P
Silver		2.2000	U	2.2000	U			P
Sodium	5000.0	10330.0000		10070.0000		2.5		P
Thallium		5.7000	U	5.7000	U			P
Vanadium		2.0000	U	2.0000	U			P
Zinc		4.4110	B	4.8520	B	9.5		P

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Solid LCS Source: _____

Aqueous LCS Source: Inorganic Ventures

Analyte	Aqueous (ug/L)			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits	%R	
Aluminum	51000.0	48140.00	94.4						
Antimony	2000.0	1900.00	95.0						
Arsenic	1050.0	982.10	93.5						
Barium	500.0	469.90	94.0						
Beryllium	500.0	467.10	93.4						
Cadmium	525.0	479.20	91.3						
Calcium	50000.0	47370.00	94.7						
Chromium	500.0	467.30	93.5						
Cobalt	500.0	457.70	91.5						
Copper	500.0	482.20	96.4						
Iron	50500.0	48240.00	95.5						
Lead	1015.0	943.60	93.0						
Magnesium	50000.0	47290.00	94.6						
Manganese	500.0	456.80	91.4						
Nickel	500.0	466.40	93.3						
Potassium	50000.0	47540.00	95.1						
Selenium	525.0	474.90	90.5						
Silver	500.0	393.10	78.6						
Sodium	50000.0	48260.00	96.5						
Thallium	550.0	504.40	91.7						
Vanadium	500.0	471.80	94.4						
Zinc	500.0	481.60	96.3						

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Solid LCS Source: _____

Aqueous LCS Source: Inorganic Ventures

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Mercury	1.0	0.91	91.0					

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001

Solid LCS Source: _____

Aqueous LCS Source: Inorganic Ventures

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Mercury	1.0	0.92	92.0					

USEPA - CLP FORMS

9

ICP SERIAL DILUTIONS

SAMPLE NO.

IDOLSTPW07FL

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATER

Level (low/med):

LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ- ence	Q	M
		C		C			
Aluminum	30.87	B	118.00	U	100.0		P
Antimony	4.70	U	23.50	U			P
Arsenic	4.80	U	24.00	U			P
Barium	125.20	B	128.60	B	2.7		P
Beryllium	0.20	U	1.00	U			P
Cadmium	0.60	U	3.94	B	100.0		P
Calcium	62060.00		62920.00		1.4		P
Chromium	1.40	U	7.00	U			P
Cobalt	2.00	U	10.00	U			P
Copper	2.40	U	12.00	U			P
Iron	65.63	B	192.50	B	193.3		P
Lead	1.48	B	6.50	U	100.0		P
Magnesium	14700.00		14860.00	B	1.1		P
Manganese	29.90		3.50	U	100.0		P
Nickel	2.10	U	10.50	U			P
Potassium	2939.00	B	3026.00	B	3.0		P
Selenium	3.40	U	17.00	U			P
Silver	2.20	U	11.00	U			P
Sodium	10200.00		8104.00	B	20.5		P
Thallium	5.70	U	28.50	U			P
Vanadium	2.00	U	10.00	U			P
Zinc	11.55	B	18.55	B	60.6		P

USEPA - CLP FORMS

9

ICP SERIAL DILUTIONS

SAMPLE NO.

IDOLSTSFW07L

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATER

Level (low/med): _____

LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ- ence	Q	M
		C		C			
Aluminum	91.69	B	118.00	U	100.0		P
Antimony	4.70	U	23.50	U			P
Arsenic	4.80	U	24.00	U			P
Barium	121.40	B	122.60	B	1.0		P
Beryllium	0.20	U	1.00	U			P
Cadmium	0.60	U	3.00	U			P
Calcium	60830.00		61650.00		1.3		P
Chromium	1.40	U	7.00	U			P
Cobalt	2.00	U	10.00	U			P
Copper	2.40	U	12.00	U			P
Iron	168.50		273.10	B	62.1		P
Lead	1.30	U	6.50	U			P
Magnesium	14440.00		14590.00	B	1.0		P
Manganese	9.27	B	3.50	U	100.0		P
Nickel	2.10	U	10.50	U			P
Potassium	2844.00	B	3002.00	B	5.6		P
Selenium	3.40	U	17.00	U			P
Silver	2.20	U	11.00	U			P
Sodium	10040.00		9653.00	B	3.9		P
Thallium	5.70	U	28.50	U			P
Vanadium	2.00	U	10.00	U			P
Zinc	4.66	B	10.57	B	126.8		P

USEPA - CLP FORMS

9

ICP SERIAL DILUTIONS

SAMPLE NO.

IDOLSTSEFW07FL

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Matrix (soil/water): WATERLevel (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)			Serial Dilution Result (S)			% Differ- ence	Q	M
			C			C			
Aluminum	23.60	U		118.00	U				P
Antimony	4.70	U		23.50	U				P
Arsenic	4.80	U		24.00	U				P
Barium	122.10	B		124.60	B	2.0			P
Beryllium	0.20	U		1.00	U				P
Cadmium	0.60	U		3.00	U				P
Calcium	62270.00			63000.00		1.2			P
Chromium	1.40	U		7.00	U				P
Cobalt	2.00	U		10.00	U				P
Copper	2.40	U		12.00	U				P
Iron	55.62	B		235.50	B	323.4			P
Lead	1.30	U		6.50	U				P
Magnesium	14750.00			14850.00	B	0.7			P
Manganese	0.70	U		3.50	U				P
Nickel	2.10	U		10.50	U				P
Potassium	2949.00	B		2938.00	B	0.4			P
Selenium	3.40	U		17.00	U				P
Silver	2.20	U		11.00	U				P
Sodium	10330.00			10860.00	B	5.1			P
Thallium	5.70	U		28.50	U				P
Vanadium	2.00	U		10.00	U				P
Zinc	4.41	B		13.52	B	206.6			P

USEPA - CLP FORMS

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046

SAS No.: _____

SDG No.: IDW001

ICP ID Number: _____

Date: 07/01/03Flame AA ID Number: Lachat Cyanide

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Cyanide			10	10.0	AS

Comments: _____

USEPA - CLP FORMS

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001ICP ID Number: _____ Date: 07/01/03Flame AA ID Number: Leeman Hydra AA

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Mercury	253.70		0.2	0.10	CV

Comments: _____

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046

SAS No.: _____

SDG No.: IDW001ICP ID Number: TJA ICAP 4Date: 07/01/03

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.215		200	23.6	P
Antimony	206.838		60	4.7	P
Arsenic	189.042		10	4.8	P
Barium	493.409		200	5.9	P
Beryllium	313.042		5	0.2	P
Cadmium	226.502		5	0.6	P
Calcium	317.933		5000	182.1	P
Chromium	267.716		10	1.4	P
Cobalt	228.616		50	2.0	P
Copper	324.754		25	2.4	P
Iron	271.441		100	33.3	P
Lead	220.353		3	1.3	P
Magnesium	279.078		5000	178.3	P
Manganese	257.610		15	0.7	P
Nickel	231.604		40	2.1	P
Potassium	766.491		5000	393.0	P
Selenium	196.026		5	3.4	P
Silver	328.068		10	2.2	P
Sodium	330.232		5000	472.7	P
Thallium	190.864		10	5.7	P
Vanadium	292.402		50	2.0	P
Zinc	213.856		20	1.0	P

Comments: _____

USEPA - CLP FORMS

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001ICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ba
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	-0.0000600	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0008950	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000330	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0004320
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0006300	0.0000000	0.0000090	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000200	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	-0.0000220	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0000200	0.0000000	-0.0000900	0.0000000	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000490	0.0000000	0.0000000
Zinc	213.86	0.0000250	0.0000000	0.0000630	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001ICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	Mn	Mo
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0072400
Antimony	206.84	0.0000000	0.0111600	0.0000000	0.0000000	-0.0024800
Arsenic	189.04	0.0000000	0.0004700	0.0000000	0.0000000	0.0013380
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0001150	0.0000000	0.0000000	0.0000000	0.0001350
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	-0.0016380
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.1059800	0.0000000	0.0000000	0.0000000	0.0036200
Lead	220.35	-0.0022600	-0.0001190	0.0000000	0.0000000	-0.0007540
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0004300	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	-0.0038600	0.0000000	0.0000000	-0.0042750
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	-0.0007920
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0032700	0.0002540	0.0000000	-0.008140	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	-0.0160000
Zinc	213.86	0.0000000	0.0000000	0.0003300	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001ICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Ni	Sb	Sn	V	Zn
Aluminum	308.22	0.0000000	0.0000000	0.1440400	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0006280	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	-0.000192	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0237000	0.0000000
Lead	220.35	0.0001240	-0.0002280	0.0000000	0.0005020	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0001660	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	-0.1212200	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.1177000
Thallium	190.86	0.0000000	0.0000000	0.0000000	0.0025400	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.86	0.0052400	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001ICP ID Number: TJA ICAP 4 Date: 07/01/03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	10.00	1000000.0	P
Antimony	10.00	100000.0	P
Arsenic	10.00	5000.0	P
Barium	10.00	10000.0	P
Beryllium	10.00	5000.0	P
Cadmium	10.00	5000.0	P
Calcium	10.00	600000.0	P
Chromium	10.00	100000.0	P
Cobalt	10.00	100000.0	P
Copper	10.00	10000.0	P
Iron	10.00	1000000.0	P
Lead	10.00	10000.0	P
Magnesium	10.00	500000.0	P
Manganese	10.00	10000.0	P
Nickel	10.00	10000.0	P
Potassium	10.00	100000.0	P
Selenium	10.00	5000.0	P
Silver	10.00	2000.0	P
Sodium	10.00	100000.0	P
Thallium	10.00	5000.0	P
Vanadium	10.00	100000.0	P
Zinc	10.00	5000.0	P

Comments: _____

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Method: AS

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
ICV	08/02/03	50.0	50.0
IDOLPDSFW14	08/02/03	50.0	50.0
IDOLSTPW06	08/02/03	50.0	50.0
IDOLSTPW07	08/02/03	50.0	50.0
IDOLSTPW07100	08/02/03	50.0	50.0
IDOLSTPW07D	08/02/03	50.0	50.0
IDOLSTPW07S	08/02/03	50.0	50.0
IDOLSTSFW06	08/02/03	50.0	50.0
IDOLSTSFW07	08/02/03	50.0	50.0
IDOLSTSFW07100	08/02/03	50.0	50.0
IDOLSTSFW07D	08/02/03	50.0	50.0
IDOLSTSFW07S	08/02/03	50.0	50.0
PBW0802A	08/02/03	50.0	50.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Method: AS

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
ICV	08/02/03	50.0	50.0
IDOLADSEFW12	08/02/03	50.0	50.0
IDOLPDSEFW13	08/02/03	50.0	50.0
IDOLSTPW05	08/02/03	50.0	50.0
IDOLSTSEFW05	08/02/03	50.0	50.0
PBW0802B	08/02/03	50.0	50.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Method: CV

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
IDOLPDSEW14	08/14/03	100.0	100.0
IDOLPDSEW14F	08/14/03	100.0	100.0
IDOLSTPW06F	08/14/03	100.0	100.0
IDOLSTPW07100F	08/14/03	100.0	100.0
IDOLSTPW07F	08/14/03	100.0	100.0
IDOLSTPW07FD	08/14/03	100.0	100.0
IDOLSTPW07FS	08/14/03	100.0	100.0
IDOLSTSEW06	08/14/03	100.0	100.0
IDOLSTSEW06F	08/14/03	100.0	100.0
IDOLSTSEW07	08/14/03	100.0	100.0
IDOLSTSEW07100	08/14/03	100.0	100.0
IDOLSTSEW07100F	08/14/03	100.0	100.0
IDOLSTSEW07D	08/14/03	100.0	100.0
IDOLSTSEW07D	08/14/03	100.0	100.0
IDOLSTSEW07F	08/14/03	100.0	100.0
IDOLSTSEW07FS	08/14/03	100.0	100.0
IDOLSTSEW07S	08/14/03	100.0	100.0
LCSW0814D	08/14/03	100.0	100.0
PBW0814D	08/14/03	100.0	100.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Method: CV

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
IDOLADSW12	08/14/03	100.0	100.0
IDOLADSW12F	08/14/03	100.0	100.0
IDOLPDSFW13	08/14/03	100.0	100.0
IDOLPDSFW13F	08/14/03	100.0	100.0
IDOLSTPW05F	08/14/03	100.0	100.0
IDOLSTSFW05	08/14/03	100.0	100.0
IDOLSTSFW05F	08/14/03	100.0	100.0
LCSW0814G	08/14/03	100.0	100.0
PBW0814G	08/14/03	100.0	100.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001Method: P

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
IDOLADSEFW12	08/08/03	100.0	100.0
IDOLADSEFW12F	08/08/03	100.0	100.0
IDOLPDSEFW13	08/08/03	100.0	100.0
IDOLPDSEFW13F	08/08/03	100.0	100.0
IDOLPDSEFW14	08/08/03	100.0	100.0
IDOLPDSEFW14F	08/08/03	100.0	100.0
IDOLSTPW05F	08/08/03	100.0	100.0
IDOLSTPW06F	08/08/03	100.0	100.0
IDOLSTPW07100F	08/08/03	100.0	100.0
IDOLSTPW07F	08/08/03	100.0	100.0
IDOLSTPW07FD	08/08/03	100.0	100.0
IDOLSTPW07FS	08/08/03	100.0	100.0
IDOLSTSFW05	08/08/03	100.0	100.0
IDOLSTSFW05F	08/08/03	100.0	100.0
IDOLSTSFW06	08/08/03	100.0	100.0
IDOLSTSFW06F	08/08/03	100.0	100.0
IDOLSTSFW07	08/08/03	100.0	100.0
IDOLSTSFW07100	08/08/03	100.0	100.0
IDOLSTSFW07100F	08/08/03	100.0	100.0
IDOLSTSFW07D	08/08/03	100.0	100.0
IDOLSTSFW07D	08/08/03	100.0	100.0
IDOLSTSFW07F	08/08/03	100.0	100.0
IDOLSTSFW07FS	08/08/03	100.0	100.0
IDOLSTSFW07S	08/08/03	100.0	100.0
LCSW0808E	08/08/03	100.0	100.0
PBW0808E	08/08/03	100.0	100.0

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Instrument ID Number: Lachat Cyanide QC8000Method: ASStart Date: 08/02/03End Date: 08/02/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	A L	T V	Z N	C N	
S0	1.00	0925																								X	
S10	1.00	0926																								X	
S30	1.00	0926																								X	
S50	1.00	0927																								X	
S100	1.00	0928																								X	
S200	1.00	0929																								X	
S300	1.00	0930																								X	
ICV	1.00	0932																								X	
ICB	1.00	0933																								X	
LRS	1.00	0934																								X	
LRS	1.00	0935																								X	
CCV	1.00	0936																								X	
CCB	1.00	0937																								X	
PBW0802A	1.00	0938																								X	
ZZZZZZ	1.00	0939																									
ZZZZZZ	1.00	0940																									
ZZZZZZ	1.00	0941																									
ZZZZZZ	1.00	0942																									
ZZZZZZ	1.00	0943																									
ZZZZZZ	1.00	0944																									
ZZZZZZ	1.00	0945																									
ZZZZZZ	1.00	0946																									
ZZZZZZ	1.00	0947																									
CCV	1.00	0948																								X	
CCB	1.00	0949																								X	
ZZZZZZ	1.00	0950																									
ZZZZZZ	1.00	0951																									
IDOLPDSFW14	1.00	0952																								X	
IDOLSTSFW06	1.00	0953																								X	
IDOLSTPW06	1.00	0954																								X	
IDOLSTPW07	1.00	0955																								X	
IDOLSTPW07D	1.00	0956																								X	
IDOLSTPW07S	1.00	0957																								X	
IDOLSTPW07100	1.00	0957																								X	
IDOLSTSFW07	1.00	0958																								X	
CCV	1.00	0959																								X	
CCB	1.00	1000																								X	
IDOLSTSFW07D	1.00	1001																								X	

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Instrument ID Number: Lachat Cyanide QC8000Method: ASStart Date: 08/02/03End Date: 08/02/03

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	V Z	Z N	C N		
IDOLSTSFW07S	1.00	1002																									X		
IDOLSTSFW07100	1.00	1003																									X		
ZZZZZZ	1.00	1004																											
ZZZZZZ	1.00	1005																											
IDOLSTSFW07A	1.00	1006																									X		
CCV	1.00	1007																									X		
CCB	1.00	1008																									X		

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Instrument ID Number: Lachat Cyanide QC8000Method: ASStart Date: 08/02/03End Date: 08/02/03

EPA Sample No.	D/F	Time	% R	Analytes																						
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	A L	T V	Z N	C N
S0	1.00	1256																								X
S10	1.00	1257																								X
S30	1.00	1258																								X
S50	1.00	1259																								X
S100	1.00	1300																								X
S200	1.00	1301																								X
S300	1.00	1302																								X
ICV	1.00	1304																								X
ICB	1.00	1305																								X
LRS	1.00	1306																								X
LRS	1.00	1307																								X
CCV	1.00	1308																								X
CCB	1.00	1309																								X
ZZZZZZ	1.00	1310																								
PBW0802B	1.00	1311																								X
ZZZZZZ	1.00	1312																								
ZZZZZZ	1.00	1313																								
ZZZZZZ	1.00	1314																								
ZZZZZZ	1.00	1315																								
ZZZZZZ	1.00	1316																								
ZZZZZZ	1.00	1317																								
ZZZZZZ	1.00	1317																								
ZZZZZZ	1.00	1318																								
CCV	1.00	1319																								X
CCB	1.00	1320																								X
ZZZZZZ	1.00	1321																								
ZZZZZZ	1.00	1322																								
ZZZZZZ	1.00	1323																								
ZZZZZZ	1.00	1324																								
ZZZZZZ	1.00	1325																								
ZZZZZZ	1.00	1326																								
ZZZZZZ	1.00	1327																								
ZZZZZZ	1.00	1328																								
ZZZZZZ	1.00	1329																								
ZZZZZZ	1.00	1330																								
CCV	1.00	1331																								X
CCB	1.00	1332																								X
IDOLADSEFW12	1.00	1333																								X

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTON Contract: 23046
 Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDW001
 Instrument ID Number: Lachat Cyanide QC8000 Method: AS
 Start Date: 08/02/03 End Date: 08/02/03

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A G	N A	T L	V	Z N	C N		
IDOLPDSFW13	1.00	1334																									X		
IDOLSTPW05	1.00	1335																									X		
IDOLSTSFW05	1.00	1336																									X		
ZZZZZZ	1.00	1337																											
CCV	1.00	1338																									X		
CCB	1.00	1339																									X		

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Instrument ID Number: TJA ICAP 4Method: PStart Date: 09/02/03End Date: 09/03/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A G	N A	T L	V N
S0	1.00	2223		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
S	1.00	2228		X					X				X	X					X			X			
S	1.00	2232			X	X								X						X			X		
S	1.00	2236					X	X	X		X	X	X			X		X			X			X	X
LRS	1.00	2242		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
LRS	1.00	2247		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
LRS	1.00	2252		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICV	1.00	2257		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICB	1.00	2302		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICSA	1.00	2307		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICSAB	1.00	2312		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CRI	1.00	2318		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCV	1.00	2323		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCB	1.00	2328		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
PBW0808E	1.00	2333		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
LCSW0808E	1.00	2338		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLPDSEFW14	1.00	2343		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLPDSEFW14F	1.00	2348		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTSEFW06	1.00	2353		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTSEFW06F	1.00	2358		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTPW06F	1.00	0003		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTPW07F	1.00	0008		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTPW07FL	5.00	0013		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTPW07FA	1.00	0018		X	X	X	X	X	X		X	X	X	X		X		X		X	X		X	X	X
CCV	1.00	0023		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCB	1.00	0028		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTPW07FD	1.00	0033		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTPW07FS	1.00	0039		X	X	X	X	X	X		X	X	X	X		X		X		X	X		X	X	X
IDOLSTPW07100F	1.00	0044		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTSEFW07	1.00	0049		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTSEFW07L	5.00	0054		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTSEFW07A	1.00	0059		X	X	X	X	X	X		X	X	X	X		X		X		X	X		X	X	X
IDOLSTSEFW07D	1.00	0104		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTSEFW07S	1.00	0109		X	X	X	X	X	X		X	X	X	X		X		X		X	X		X	X	X
IDOLSTSEFW07F	1.00	0114		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLSTSEFW07FL	5.00	0119		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCV	1.00	0124		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCB	1.00	0129		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Instrument ID Number: TJA ICAP 4Method: PStart Date: 09/02/03End Date: 09/03/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N
IDOLSTSEFW07FA	1.00	0134		X	X	X	X	X	X		X	X	X	X	X		X		X		X	X		X	X
IDOLSTSEFW07D	1.00	0139		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
IDOLSTSEFW07FS	1.00	0144		X	X	X	X	X	X		X	X	X	X	X		X		X		X	X		X	X
IDOLSTSEFW07100	1.00	0149		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
IDOLSTSEFW07100F	1.00	0154		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
IDOLADSEFW12	1.00	0159		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
IDOLADSEFW12F	1.00	0204		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
IDOLPDSEFW13	1.00	0209		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
IDOLPDSEFW13F	1.00	0214		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
IDOLSTPW05F	1.00	0219		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
CCV	1.00	0224		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
CCB	1.00	0230		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
IDOLSTSEFW05	1.00	0235		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
IDOLSTSEFW05F	1.00	0240		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
ICSA	1.00	0245		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
ICSAB	1.00	0250		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
CRI	1.00	0255		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
CCV	1.00	0300		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
CCB	1.00	0305		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/18/03End Date: 08/18/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V	Z N	C N
S0	1.00	1132															X										
S0.2	1.00	1133															X										
S0	1.00	1135															X										
S0.2	1.00	1137															X										
S0.5	1.00	1139															X										
S1	1.00	1140															X										
S5	1.00	1142															X										
S10	1.00	1144															X										
ICV	1.00	1146															X										
ICB	1.00	1147															X										
CRA	1.00	1149															X										
CCV	1.00	1151															X										
CCB	1.00	1152															X										
ZZZZZZ	1.00	1154																									
ZZZZZZ	1.00	1156																									
ZZZZZZ	1.00	1158																									
ZZZZZZ	1.00	1200																									
ZZZZZZ	1.00	1202																									
ZZZZZZ	1.00	1204																									
ZZZZZZ	1.00	1205																									
ZZZZZZ	1.00	1207																									
ZZZZZZ	1.00	1209																									
CCV	1.00	1211															X										
CCB	1.00	1212															X										
ZZZZZZ	1.00	1214																									
ZZZZZZ	1.00	1216																									
ZZZZZZ	1.00	1217																									
ZZZZZZ	1.00	1219																									
ZZZZZZ	1.00	1221																									
ZZZZZZ	1.00	1223																									
ZZZZZZ	1.00	1225																									
ZZZZZZ	1.00	1227																									
ZZZZZZ	1.00	1228																									
CCV	1.00	1230															X										
CCB	1.00	1232															X										
ZZZZZZ	1.00	1234																									
ZZZZZZ	1.00	1236																									
ZZZZZZ	1.00	1239																									

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/18/03End Date: 08/18/03

EPA Sample No.	D/F	Time	% R	Analytes																									
				A	S	A	B	B	C	C	C	C	F	P	M	M	H	N	K	S	A	N	T	V	Z	C			
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I	E	G	A	L	N	N				
ZZZZZZ	1.00	1240																											
ZZZZZZ	1.00	1242																											
PBW0814G	1.00	1244															X												
LCSW0814G	1.00	1246															X												
ZZZZZZ	1.00	1248																											
ZZZZZZ	1.00	1250																											
CCV	1.00	1252															X												
CCB	1.00	1254															X												

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/18/03End Date: 08/18/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	A L	T V	Z N
S0	1.00	1332																X							
S0.2	1.00	1334																X							
S0.5	1.00	1336																X							
S1	1.00	1338																X							
S5	1.00	1339																X							
S10	1.00	1341																X							
ICV	1.00	1343																X							
ICB	1.00	1345																X							
CRA	1.00	1347																X							
CCV	1.00	1349																X							
CCB	1.00	1350																X							
ZZZZZZ	1.00	1352																							
ZZZZZZ	1.00	1354																							
ZZZZZZ	1.00	1356																							
ZZZZZZ	1.00	1358																							
IDOLADSEFW12	1.00	1400																X							
IDOLADSEFW12F	1.00	1402																X							
IDOLPDSEFW13	1.00	1404																X							
IDOLPDSEFW13F	1.00	1406																X							
IDOLSTPW05F	1.00	1408																X							
CCV	1.00	1409																X							
CCB	1.00	1411																X							
IDOLSTSEFW05	1.00	1413																X							
IDOLSTSEFW05F	1.00	1414																X							
CCV	1.00	1416																X							
CCB	1.00	1418																X							

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046SAS No.: _____ SDG No.: IDW001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/18/03End Date: 08/18/03

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V	Z N	C N				
S0	1.00	1545															X														
S0.2	1.00	1547															X														
S0.5	1.00	1549															X														
S1	1.00	1551															X														
S5	1.00	1552															X														
S10	1.00	1554															X														
ICV	1.00	1556															X														
ICB	1.00	1558															X														
CRA	1.00	1559															X														
CCV	1.00	1601															X														
CCB	1.00	1603															X														
ZZZZZZ	1.00	1605																													
ZZZZZZ	1.00	1607																													
ZZZZZZ	1.00	1609																													
ZZZZZZ	1.00	1611																													
ZZZZZZ	1.00	1613																													
ZZZZZZ	1.00	1614																													
ZZZZZZ	1.00	1616																													
ZZZZZZ	1.00	1618																													
ZZZZZZ	1.00	1620																													
CCV	1.00	1622															X														
CCB	1.00	1623															X														
ZZZZZZ	1.00	1625																													
ZZZZZZ	1.00	1627																													
ZZZZZZ	1.00	1629																													
ZZZZZZ	1.00	1631																													
ZZZZZZ	1.00	1632																													
PBW0814D	1.00	1634															X														
LCSW0814D	1.00	1636															X														
IDOLPDSFW14	1.00	1638															X														
IDOLPDSFW14F	1.00	1640															X														
CCV	1.00	1641															X														
CCB	1.00	1643															X														
IDOLSTSW06	1.00	1646															X														
IDOLSTSW06F	1.00	1648															X														
IDOLSTPW06F	1.00	1650															X														
IDOLSTPW07F	1.00	1651															X														
IDOLSTPW07FS	1.00	1653															X														

USEPA - CLP FORMS

14

ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDW001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/18/03End Date: 08/18/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N
IDOLSTPW07FD.	1.00	1655															X								
IDOLSTPW07100F	1.00	1657															X								
IDOLSTSFW07	1.00	1659															X								
IDOLSTSFW07S	1.00	1700															X								
CCV	1.00	1702															X								
CCB	1.00	1704															X								
IDOLSTSFW07D	1.00	1707															X								
IDOLSTSFW07F	1.00	1708															X								
IDOLSTSFW07FS	1.00	1710															X								
IDOLSTSFW07D	1.00	1712															X								
IDOLSTSFW07100	1.00	1714															X								
IDOLSTSFW07100F	1.00	1716															X								
ZZZZZZ	1.00	1718																							
ZZZZZZ	1.00	1720																							
ZZZZZZ	1.00	1722																							
CCV	1.00	1724															X								
CCB	1.00	1726															X								

**STL Burlington
Colchester, Vermont**

**Sample Data Summary
Package**

SDG: IDD001

September 22, 2003

Ms. Cathy Bohlke
EA Engineering
12011 Bellevue-Redmond Rd.
Suite 200
Bellevue, WA 98005

Re: Laboratory Project No. 23046
Case No. 23046; SDG: IDD001

Dear Ms. Bohlke:

Enclosed are the analytical results of samples received intact by Severn Trent Laboratories on July 25, 2003. Laboratory numbers have been assigned and designated as follows:

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Sample Date</u>	<u>Sample Matrix</u>
Received: 07/25/03 ETR No: 95004			
535843	IDOLSTSSD05	07/22/03	Sediment
535844	IDOLPDSSD14	07/22/03	Sediment
535844MS	IDOLPDSSD14MS	07/22/03	Sediment
535844DP	IDOLPDSSD14REP	07/22/03	Sediment
535845	IDOLPDSSD14100	07/22/03	Sediment
535846	IDOLPDPSD13	07/22/03	Sediment
535847	IDOLADPSD12	07/22/03	Sediment
535848	IDOLSTPSD07	07/22/03	Sediment
535849	IDOLSTSSD06	07/22/03	Sediment

Due to reporting software limitations, sample identifications may have been truncated. In most instances only punctuation was removed.

Documentation that identifies the condition of the samples at the time of sample receipt and the issues arising at the time of sample login is included in the Sample Handling section of this submittal. Please note that the sample identified as IDOLSTSSD06 was received but not listed on the chain-of-custody form. The laboratory assigned analyses based on information listed on sample containers. Also note that in most instances the chain-of-custody form indicated that three sample containers were received but the laboratory only received two containers which was plenty for the analyses requested.

The analysis for cyanide was performed by STL's North Canton facility, as approved by EA Engineering. STL North Canton assigned "Lot" numbers as samples were received. Though laboratory numbers may differ, the client's sample identifications were maintained. The results for this delivery group including a case narrative prepared by the North Canton laboratory are attached to this report.

Severn Trent Laboratories, Inc.

STL Burlington • 208 South Park Drive, Suite 1, Colchester, VT 05446

Tel 802 655 1203 Fax 802 655 1248 • www.stl-inc.com

This narrative identifies anomalies that occurred during the analyses of samples in this delivery group. If there is no description following regarding a certain methodology requested on the chain-of-custody record, then there were no exceptions to the laboratory quality control criteria noted during that analysis.

Metals by 6010B:

The percent difference between the original determinations and serial dilution determinations for the following metals in sample in sample IDOLPDSSD14 were above the control criteria of ± 10 percent: aluminum, arsenic, barium, cadmium, calcium, iron, lead, magnesium, manganese, nickel, vanadium, and zinc. Matrix interference is suspected and results have been flagged with an "E" accordingly.

The relative percent difference (RPD) between the initial and duplicate analysis of sample IDOLPDSSD14 for cadmium (22.8) was above the established control limit of ± 20 percent. Corresponding sample results have been flagged with a "**" to denote this anomaly.

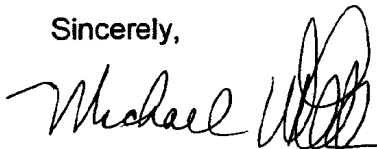
The recoveries of antimony (36.3 percent) and cadmium (133.3 percent) from the laboratory fortified aliquot of sample IDOLPDSSD14 were outside of the laboratory established control limits of 75-125 percent. Sample results have been flagged with an "N" accordingly.

If there are any questions regarding this submittal, please contact Jeannine McCrumb at (802) 655-1203.

This report shall not be reproduced, except in full, without the written approval of the laboratory. This report is sequentially numbered starting with page 0001 and ending with page 0476.

I certify that this package is in compliance with the NELAC requirements, both technically and for completeness, for other than the conditions detailed above. The Laboratory Director or his designee, as verified by the following signature, has authorized the release of the data contained in this hardcopy data package.

Sincerely,


Michael F. Wheeler, Ph.D.
Laboratory Director

Enclosure
MFW/jtw/jmm

SEVERN
TRENT

STL

SEVERN TRENT LABORATORIES, INC.

STL Burlington
208 South Park Drive, Suite 1
Colchester, VT 05446 Tel 802 655 1203

Sheet 2 of 2

CHAIN OF CUSTODY RECORD

Report to:

Invoice to:

Company: EA Engineering

Company: Same

Address: 12011 Bellevue - Leonard B.

Address:

Bellevue, WA 98005

Contact: Cathy Burke

Contact:

Phone: 425-451-7400 x 144

Phone:

Fax: 425-451-7800

Fax:

Contract/

Quote: IDOL City Mine

Sampler's Name

Sampler's Signature

Savannah J. Prosser

Savannah J. Prosser

Project No.

Project Name

1389-09-0002 IDOL City Mine

No./Type of containers?

4000

Matrix: Date Time

Identifying Marks of Sample(s)

VOA A/G 1 Lt. P/O

Lab/Sample ID (Lab Use Only)

ANALYSIS
REQUESTED

TDC, TAL metals, CN

Lab Use Only
Due Date:Temp. of coolers
when received (C°):

1 2 3 4 5

Custody Seal N / Y

Intact N / Y

Screened
For Radioactivity ☐Relinquished by: (Signature)
Savannah J. Prosser

Date 7/24/03 0900

Received by: (Signature)
Savannah J. Prosser

Date 7/24/03 0930

Remarks

Client's delivery of samples constitutes acceptance of Severn Trent Laboratories terms and conditions contained in the Price Schedule.

Matrix: WW - Wastewater
Container: VOA - 40 ml VialW - Water
A/G - Amber / Or Glass 1 LiterS - Soil
L - Liquid
A - Air bag
250 ml - Glass wide mouthC - Charcoal Tube
P/O - Plastic or other

SL - Sludge

O - Oil



**Sample Data Summary Package
For Wet Chemistry**

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTSSD05

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535843

Matrix: SEDIMENT

Client: EASEAT

Date Received: 07/25/03

% Solids: 74.5

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		74.5	
IN847	TOC by Lloyd Kahn	07/29/03	BLK0729A	mg/Kg	1	135	12200	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLPDSSD14

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535844

Matrix: SEDIMENT

Client: EASEAT

Date Received: 07/25/03

% Solids: 39.3

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		39.3	
IN847	TOC by Lloyd Kahn	07/29/03	BLKLG0729A	mg/Kg	1	255	42200	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLPDSSD14100

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535845

Matrix: SEDIMENT

Client: EASEAT

Date Received: 07/25/03

% Solids: 43.8

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		43.8	
IN847	TOC by Lloyd Kahn	07/29/03	BLKLG0729A	mg/Kg	1	229	39600	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLPDPD13

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLV

Case No.: 23046

Lab Sample ID: 535846

Matrix: SEDIMENT

Client: EASEAT

Date Received: 07/25/03

% Solids: 64.5

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		64.5	
IN847	TOC by Lloyd Kahn	07/29/03	BLKLK0729A	mg/Kg	1	156	15400	

WET CHEMISTRY

Sample Report Summary

IDOLADPSD12

SDG No.: IDD001

Lab Sample ID: 535847

Date Received: 07/25/03

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		56.2	
IN847	TOC by Lloyd Kahn	07/29/03	BLKLN0729A	mg/Kg	1	178	18100	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTPSD07

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535848

Matrix: SEDIMENT

Client: EASEAT

Date Received: 07/25/03

% Solids: 65.3

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		65.3	
IN847	TOC by Lloyd Kahn	07/29/03	BLKLK0729A	mg/Kg	1	154	12100	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLSTSSD06

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535849

Matrix: SEDIMENT

Client: EASEAT

Date Received: 07/25/03

% Solids: 80.3

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		80.3	
IN847	TOC by Lloyd Kahn	07/29/03	BLKLK0729A	mg/Kg	1	125	2060	

WET CHEMISTRY

Method Blank Report Summary

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLVT

Case No.: 23046

Matrix: SOIL

Client: EASEAT

% Solids:

Lab Sample ID	Method	Parameter	Conc.	Units	Qual.	DF	RL	Analytical Run Date	Analytical Batch
BLKLN0729A	IN847	TOC by Lloyd Kahn	100	mg/Kg	U	1	100	07/29/03	BLKLN0729A

WET CHEMISTRY

Matrix Spike Sample Report Summary

Client Sample No.

IDOLPDSSD14MS

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535844MS

Matrix: SEDIMENT

Client: EASEAT

Date Received: 07/25/03

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	Matrix Spike Result Conc. Qual.	Sample Result Conc. Qual.	Spike Added	% Recovery*
IN847	TOC by Lloyd Kahn	07/29/03	BLKLG0729A	mg/Kg	239300	42200	201564	97.8

* Control Limit for Percent Recovery is 75-125%, unless otherwise specified.

WET CHEMISTRY

Duplicate Sample Report Summary

Client Sample No.

IDOLPDSSD14REP

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535844DP

Matrix: SEDIMENT

Client: EASEAT

Date Received: 07/25/03

% Solids: 44.6

Method	Parameter	Analytical Run Date	Analytical Batch	Units	Sample Result Conc.	Sample Result Qual.	Duplicate Sample Result Conc.	Duplicate Sample Result Qual.	RPD*
IN623	Solids, Percent	07/29/03	N/A	%	39.3		44.6		13
IN847	TOC by Lloyd Kahn	07/29/03	BLKLG0729A	mg/Kg	42200		49700		16

* Control Limit for RPD is +/- 20%, unless otherwise specified.

Printed on: 09/19/03 09:25 AM

WET CHEMISTRY

Laboratory Control Sample Report Summary

Lab Name: STL BURLINGTON

Contract: LSO1024805

SDG No.: IDD001

Lab Code: STLVT

Case No.: 23046

Matrix: SOIL

Client: EASEAT

% Solids:

Lab Sample ID	Method	Parameter	Analytical Run Date	Analytical Batch	Units	LCS Conc.	True Value	% Recovery*
LCSLK0729A	IN847	TOC by Lloyd Kahn	07/29/03	BLKLNK0729A	mg/Kg	8730	8500.0000	102.7

* Control Limit for Percent Recovery is 80-120%, unless otherwise specified.

Printed on: 09/19/03 09:31 AM



**Sample Data Summary Package
For Metals**

USEPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL BURLINGTON Contract: 23046
Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001
SOW No.: IIM04.1

EPA Sample No.	Lab Sample ID.
<u>IDOLADPSD12</u>	<u>535847</u>
<u>IDOLPDPSD13</u>	<u>535846</u>
<u>IDOLPDSSD14</u>	<u>535844</u>
<u>IDOLPDSSD14100</u>	<u>535845</u>
<u>IDOLPDSSD14D</u>	<u>535844DP</u>
<u>IDOLPDSSD14S</u>	<u>535844MS</u>
<u>IDOLSTPSD07</u>	<u>535848</u>
<u>IDOLSTSSD05</u>	<u>535843</u>
<u>IDOLSTSSD06</u>	<u>535849</u>

Were ICP interelement corrections applied? Yes/No YES
Were ICP background corrections applied? Yes/No YES
If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____
Date: _____ Title: _____

USEPA - CLP

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLADPSD12

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001

Matrix (soil/water): SOIL Lab Sample ID: 535847

Level (low/med): LOW Date Received: 7/25/2003

% Solids: 56.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9380		E	P
7440-36-0	Antimony	10.0	B	N	P
7440-38-2	Arsenic	510		E	P
7440-39-3	Barium	243		E	P
7440-41-7	Beryllium	0.48	B		P
7440-43-9	Cadmium	0.10	U	NE*	P
7440-70-2	Calcium	16100		E	P
7440-47-3	Chromium	3.6			P
7440-48-4	Cobalt	14.0			P
7440-50-8	Copper	22.0			P
7439-89-6	Iron	63500		E	P
7439-92-1	Lead	12.0		E	P
7439-95-4	Magnesium	1480		E	P
7439-96-5	Manganese	2570		E	P
7439-97-6	Mercury	0.15			CV
7440-02-0	Nickel	7.3		E	P
7440-09-7	Potassium	1680			P
7782-49-2	Selenium	3.2			P
7440-22-4	Silver	0.37	U		P
7440-23-5	Sodium	202	B		P
7440-28-0	Thallium	0.96	U		P
7440-62-2	Vanadium	20.8		E	P
7440-66-6	Zinc	76.3		E	P

Color Before: brown Clarity Before: _____ Texture: mediumColor After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLPDFSD13

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001

Matrix (soil/water): SOIL Lab Sample ID: 535846

Level (low/med): LOW Date Received: 7/25/2003

% Solids: 64.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8020		E	P
7440-36-0	Antimony	2.3	B	N	P
7440-38-2	Arsenic	68.8		E	P
7440-39-3	Barium	226		E	P
7440-41-7	Beryllium	0.47	B		P
7440-43-9	Cadmium	0.15	B	NE*	P
7440-70-2	Calcium	3560		E	P
7440-47-3	Chromium	4.2			P
7440-48-4	Cobalt	7.5	B		P
7440-50-8	Copper	27.3			P
7439-89-6	Iron	17300		E	P
7439-92-1	Lead	14.8		E	P
7439-95-4	Magnesium	1630		E	P
7439-96-5	Manganese	320		E	P
7439-97-6	Mercury	0.23			CV
7440-02-0	Nickel	11.4		E	P
7440-09-7	Potassium	1410			P
7782-49-2	Selenium	0.90			P
7440-22-4	Silver	0.33	U		P
7440-23-5	Sodium	193	B		P
7440-28-0	Thallium	0.87	U		P
7440-62-2	Vanadium	16.7		E	P
7440-66-6	Zinc	60.1		E	P

Color Before: brown Clarity Before: _____ Texture: mediumColor After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLPDSSD14

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001

Matrix (soil/water): SOIL Lab Sample ID: 535844

Level (low/med): LOW Date Received: 7/25/2003

% Solids: 39.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	25400		E	P
7440-36-0	Antimony	7.5	B	N	P
7440-38-2	Arsenic	118		E	P
7440-39-3	Barium	618		E	P
7440-41-7	Beryllium	1.3			P
7440-43-9	Cadmium	11.9		NE*	P
7440-70-2	Calcium	10700		E	P
7440-47-3	Chromium	11.2			P
7440-48-4	Cobalt	15.1			P
7440-50-8	Copper	84.8			P
7439-89-6	Iron	46300		E	P
7439-92-1	Lead	486		E	P
7439-95-4	Magnesium	2990		E	P
7439-96-5	Manganese	577		E	P
7439-97-6	Mercury	4.1			CV
7440-02-0	Nickel	26.5		E	P
7440-09-7	Potassium	3530			P
7782-49-2	Selenium	2.5			P
7440-22-4	Silver	1.3	B		P
7440-23-5	Sodium	351	B		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	39.6		E	P
7440-66-6	Zinc	2050		E	P

Color Before: brown Clarity Before: _____ Texture: mediumColor After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLEPDSSD14100

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001

Matrix (soil/water): SOIL Lab Sample ID: 535845

Level (low/med): LOW Date Received: 7/25/2003

% Solids: 43.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19800		E	P
7440-36-0	Antimony	6.4	B	N	P
7440-38-2	Arsenic	144		E	P
7440-39-3	Barium	604		E	P
7440-41-7	Beryllium	1.1	B		P
7440-43-9	Cadmium	14.1		NE*	P
7440-70-2	Calcium	7550		E	P
7440-47-3	Chromium	9.3			P
7440-48-4	Cobalt	10.6	B		P
7440-50-8	Copper	75.1			P
7439-89-6	Iron	42100		E	P
7439-92-1	Lead	462		E	P
7439-95-4	Magnesium	2290		E	P
7439-96-5	Manganese	378		E	P
7439-97-6	Mercury	4.0			CV
7440-02-0	Nickel	18.6		E	P
7440-09-7	Potassium	2840			P
7782-49-2	Selenium	2.0			P
7440-22-4	Silver	1.3	B		P
7440-23-5	Sodium	262	B		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	32.0		E	P
7440-66-6	Zinc	1560		E	P

Color Before: brown Clarity Before: _____ Texture: mediumColor After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTPSD07

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001

Matrix (soil/water): SOIL Lab Sample ID: 535848

Level (low/med): LOW Date Received: 7/25/2003

% Solids: 65.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10600		E	P
7440-36-0	Antimony	2.7	B	N	P
7440-38-2	Arsenic	45.7		E	P
7440-39-3	Barium	221		E	P
7440-41-7	Beryllium	0.62	B		P
7440-43-9	Cadmium	0.089	U	NE*	P
7440-70-2	Calcium	3170		E	P
7440-47-3	Chromium	6.3			P
7440-48-4	Cobalt	9.0			P
7440-50-8	Copper	23.3			P
7439-89-6	Iron	28400		E	P
7439-92-1	Lead	10.3		E	P
7439-95-4	Magnesium	1890		E	P
7439-96-5	Manganese	533		E	P
7439-97-6	Mercury	0.23			CV
7440-02-0	Nickel	8.5		E	P
7440-09-7	Potassium	1870			P
7782-49-2	Selenium	1.5			P
7440-22-4	Silver	0.33	U		P
7440-23-5	Sodium	227	B		P
7440-28-0	Thallium	0.85	U		P
7440-62-2	Vanadium	28.7		E	P
7440-66-6	Zinc	77.5		E	P

Color Before: brown Clarity Before: _____ Texture: mediumColor After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSSD05

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001

Matrix (soil/water): SOIL Lab Sample ID: 535843

Level (low/med): LOW Date Received: 7/25/2003

% Solids: 74.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18000		E	P
7440-36-0	Antimony	4.6	B	N	P
7440-38-2	Arsenic	142		E	P
7440-39-3	Barium	422		E	P
7440-41-7	Beryllium	1.1			P
7440-43-9	Cadmium	6.3		NE*	P
7440-70-2	Calcium	2680		E	P
7440-47-3	Chromium	3.2			P
7440-48-4	Cobalt	20.4			P
7440-50-8	Copper	83.1			P
7439-89-6	Iron	42100		E	P
7439-92-1	Lead	1190		E	P
7439-95-4	Magnesium	779		E	P
7439-96-5	Manganese	747		E	P
7439-97-6	Mercury	2.5			CV
7440-02-0	Nickel	20.3		E	P
7440-09-7	Potassium	1540			P
7782-49-2	Selenium	2.1			P
7440-22-4	Silver	1.5			P
7440-23-5	Sodium	198	B		P
7440-28-0	Thallium	0.92	B		P
7440-62-2	Vanadium	10.8		E	P
7440-66-6	Zinc	1660		E	P

Color Before: brown Clarity Before: _____ Texture: mediumColor After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLSTSSD06

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Matrix (soil/water): SOILLab Sample ID: 535849Level (low/med): LOWDate Received: 7/25/2003% Solids: 80.3Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11200		E	P
7440-36-0	Antimony	1.5	B	N	P
7440-38-2	Arsenic	20.3		E	P
7440-39-3	Barium	180		E	P
7440-41-7	Beryllium	0.48	B		P
7440-43-9	Cadmium	0.42	B	NE*	P
7440-70-2	Calcium	3380		E	P
7440-47-3	Chromium	6.3			P
7440-48-4	Cobalt	10.0			P
7440-50-8	Copper	19.8			P
7439-89-6	Iron	25700		E	P
7439-92-1	Lead	22.0		E	P
7439-95-4	Magnesium	5730		E	P
7439-96-5	Manganese	540		E	P
7439-97-6	Mercury	0.39			CV
7440-02-0	Nickel	13.1		E	P
7440-09-7	Potassium	2360			P
7782-49-2	Selenium	1.2			P
7440-22-4	Silver	0.27	U		P
7440-23-5	Sodium	124	B		P
7440-28-0	Thallium	0.69	U		P
7440-62-2	Vanadium	27.5		E	P
7440-66-6	Zinc	186		E	P

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: pale yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	26000.0	26330.00	101.3	30200.0	30860.00	102.2	30840.00	102.1	P
Antimony	250.0	256.00	102.4	300.0	318.50	106.2	315.80	105.3	P
Arsenic	250.0	253.30	101.3	100.0	102.70	102.7	100.90	100.9	P
Barium	500.0	504.40	100.9	200.0	205.50	102.8	205.60	102.8	P
Beryllium	500.0	512.00	102.4	100.0	101.90	101.9	102.30	102.3	P
Cadmium	500.0	500.40	100.1	100.0	100.90	100.9	100.70	100.7	P
Calcium	25000.0	25750.00	103.0	30200.0	31110.00	103.0	30990.00	102.6	P
Chromium	500.0	507.20	101.4	200.0	201.30	100.6	201.50	100.8	P
Cobalt	500.0	499.60	99.9	200.0	202.60	101.3	202.00	101.0	P
Copper	500.0	511.10	102.2	200.0	208.10	104.0	209.20	104.6	P
Iron	25500.0	26520.00	104.0	30200.0	31040.00	102.8	30990.00	102.6	P
Lead	1000.0	1003.00	100.3	400.0	403.30	100.8	399.00	99.8	P
Magnesium	25000.0	25660.00	102.6	30200.0	30860.00	102.2	30790.00	102.0	P
Manganese	500.0	502.60	100.5	200.0	204.00	102.0	203.80	101.9	P
Mercury	3.0	2.73	91.0	5.0	4.93	98.6	4.77	95.4	CV
Nickel	500.0	504.90	101.0	200.0	201.30	100.6	201.60	100.8	P
Potassium	25000.0	26280.00	105.1	30200.0	31830.00	105.4	31840.00	105.4	P
Silver	500.0	506.20	101.2	100.0	103.70	103.7	104.60	104.6	P
Sodium	25000.0	25080.00	100.3	30200.0	30020.00	99.4	30530.00	101.1	P
Thallium	250.0	240.10	96.0	100.0	100.40	100.4	100.90	100.9	P
Vanadium	500.0	505.40	101.1	200.0	203.30	101.6	203.60	101.8	P
Zinc	500.0	509.50	101.9	200.0	206.20	103.1	205.80	102.9	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	30830.00	102.1	31050.00	102.8	P
Antimony				300.0	314.80	104.9	318.30	106.1	P
Arsenic				100.0	102.10	102.1	105.00	105.0	P
Barium				200.0	205.40	102.7	206.80	103.4	P
Beryllium				100.0	102.70	102.7	102.50	102.5	P
Cadmium				100.0	100.90	100.9	101.10	101.1	P
Calcium				30200.0	31040.00	102.8	31080.00	102.9	P
Chromium				200.0	202.00	101.0	201.40	100.7	P
Cobalt				200.0	202.40	101.2	202.30	101.2	P
Copper				200.0	208.30	104.2	210.20	105.1	P
Iron				30200.0	31100.00	103.0	31180.00	103.2	P
Lead				400.0	400.80	100.2	398.90	99.7	P
Magnesium				30200.0	30890.00	102.3	30860.00	102.2	P
Manganese				200.0	204.10	102.0	204.40	102.2	P
Mercury				5.0	4.87	97.4			CV
Nickel				200.0	201.50	100.8	202.00	101.0	P
Potassium				30200.0	31770.00	105.2	31840.00	105.4	P
Silver				100.0	103.80	103.8	103.20	103.2	P
Sodium				30200.0	30280.00	100.3	30300.00	100.3	P
Thallium				100.0	98.08	98.1	101.10	101.1	P
Vanadium				200.0	204.30	102.2	204.80	102.4	P
Zinc				200.0	206.50	103.2	207.40	103.7	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDD001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Manganese	500.0	493.00	98.6	200.0	199.10	99.6	198.30	99.2	P
Zinc	500.0	502.00	100.4	200.0	203.50	101.8	201.90	101.0	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDD001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Manganese				200.0	197.20	98.6	198.60	99.3	P
Zinc				200.0	201.00	100.5	201.10	100.6	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDD001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Selenium	250.0	258.00	103.2	100.0	102.70	102.7	98.79	98.8	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDD001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Selenium				100.0	101.00	101.0	89.67	89.7	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	26000.0	26440.00	101.7	30200.0	30430.00	100.8	30390.00	100.6	P
Antimony	250.0	249.30	99.7	300.0	299.80	99.9	299.40	99.8	P
Arsenic	250.0	245.80	98.3	100.0	100.40	100.4	99.21	99.2	P
Barium	500.0	493.80	98.8	200.0	200.40	100.2	199.70	99.8	P
Beryllium	500.0	500.80	100.2	100.0	99.35	99.4	99.46	99.5	P
Cadmium	500.0	490.40	98.1	100.0	98.27	98.3	98.03	98.0	P
Chromium	500.0	496.20	99.2	200.0	197.40	98.7	196.40	98.2	P
Cobalt	500.0	488.10	97.6	200.0	196.40	98.2	194.50	97.2	P
Copper	500.0	502.20	100.4	200.0	203.70	101.8	202.00	101.0	P
Iron	25500.0	26380.00	103.5	30200.0	30230.00	100.1	30010.00	99.4	P
Lead	1000.0	980.90	98.1	400.0	387.50	96.9	382.40	95.6	P
Manganese	500.0	492.20	98.4	200.0	199.00	99.5	198.80	99.4	P
Nickel	500.0	492.40	98.5	200.0	196.70	98.4	194.70	97.4	P
Silver	500.0	501.40	100.3	100.0	100.90	100.9	101.00	101.0	P
Thallium	250.0	239.80	95.9	100.0	100.70	100.7	94.07	94.1	P
Vanadium	500.0	495.00	99.0	200.0	199.20	99.6	197.80	98.9	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	30380.00	100.6	30490.00	101.0	P
Antimony				300.0	297.10	99.0	297.70	99.2	P
Arsenic				100.0	99.73	99.7	98.53	98.5	P
Barium				200.0	199.40	99.7	199.10	99.6	P
Beryllium				100.0	99.31	99.3	99.47	99.5	P
Cadmium				100.0	98.40	98.4	98.71	98.7	P
Chromium				200.0	195.90	98.0	195.90	98.0	P
Cobalt				200.0	193.70	96.8	192.80	96.4	P
Copper				200.0	202.50	101.2	202.50	101.2	P
Iron				30200.0	29960.00	99.2	29950.00	99.2	P
Lead				400.0	383.20	95.8	382.40	95.6	P
Manganese				200.0	198.70	99.4	199.40	99.7	P
Nickel				200.0	194.00	97.0	193.90	97.0	P
Silver				100.0	101.80	101.8	102.50	102.5	P
Thallium				100.0	98.46	98.5	94.50	94.5	P
Vanadium				200.0	197.90	99.0	197.50	98.8	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum				400.0	508.90	127.2	491.20	122.8
Antimony				120.0	126.90	105.8	128.00	106.7
Arsenic				20.0	20.38	101.9	21.61	108.0
Barium				400.0	399.30	99.8	401.50	100.4
Beryllium				10.0	10.20	102.0	10.29	102.9
Cadmium				10.0	10.16	101.6	10.13	101.3
Calcium				10000.0	10620.00	106.2	10590.00	105.9
Chromium				20.0	20.98	104.9	21.72	108.6
Cobalt				100.0	98.10	98.1	97.82	97.8
Copper				50.0	51.08	102.2	51.67	103.3
Iron				200.0	272.80	136.4	294.90	147.4
Lead				6.0	5.97	99.5	7.04	117.3
Magnesium				10000.0	10400.00	104.0	10370.00	103.7
Manganese				30.0	29.95	99.8	30.10	100.3
Mercury	0.2	0.17	85.0					
Nickel				80.0	80.53	100.7	80.33	100.4
Potassium				10000.0	11670.00	116.7	11610.00	116.1
Silver				20.0	20.21	101.0	20.64	103.2
Sodium				10000.0	10180.00	101.8	10210.00	102.1
Thallium				20.0	18.78	93.9	19.33	96.6
Vanadium				100.0	99.31	99.3	99.30	99.3
Zinc				40.0	40.82	102.0	40.95	102.4

Control Limits: no limits have been established by EPA at this time

USEPA - CLP

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Manganese				30.0	30.81	102.7	31.15	103.8
Zinc				40.0	41.51	103.8	41.85	104.6

Control Limits: no limits have been established by EPA at this time

USEPA - CLP

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Selenium				10.0	9.91	99.1	10.35	103.5

Control Limits: no limits have been established by EPA at this time

USEPA - CLP

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDD001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	True Found %R			CRDL Standard for ICP				
				Initial		%R	Final	
	True	Found	%R	True	Found		Found	%R
Aluminum				400.0	517.00	129.2	504.20	126.0
Antimony				120.0	120.50	100.4	119.80	99.8
Arsenic				20.0	21.58	107.9	20.16	100.8
Barium				400.0	394.30	98.6	392.50	98.1
Beryllium				10.0	10.32	103.2	10.45	104.5
Cadmium				10.0	9.96	99.6	9.96	99.6
Chromium				20.0	23.19	116.0	23.88	119.4
Cobalt				100.0	97.11	97.1	94.75	94.8
Copper				50.0	51.62	103.2	50.95	101.9
Iron				200.0	291.50	145.8	292.90	146.4
Lead				6.0	5.68	94.7	4.86	81.0
Manganese				30.0	30.71	102.4	30.87	102.9
Nickel				80.0	82.48	103.1	80.63	100.8
Silver				20.0	20.07	100.4	20.75	103.8
Thallium				20.0	20.07	100.4	21.95	109.8
Vanadium				100.0	98.87	98.9	99.28	99.3

Control Limits: no limits have been established by EPA at this time

USEPA - CLP

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank		M
			1	C	2	C	3	C		C	
Aluminum	23.6	U	23.6	U	23.6	U	23.6	U	-2.974	B	P
Antimony	4.7	U	4.7	U	4.7	U	4.7	U	0.605	B	P
Arsenic	4.8	U	4.8	U	4.8	U	4.8	U	0.480	U	P
Barium	5.9	U	5.9	U	5.9	U	5.9	U	0.590	U	P
Beryllium	0.2	U	0.2	U	0.2	U	0.2	U	0.026	B	P
Cadmium	0.6	U	0.6	U	0.6	U	0.6	U	0.060	U	P
Calcium	182.1	U	182.1	U	182.1	U	182.1	U	18.210	U	P
Chromium	1.5	B	4.6	B	5.8	B	7.8	B	0.140	U	P
Cobalt	2.0	U	2.0	U	2.0	U	2.0	U	0.200	U	P
Copper	2.4	U	2.4	U	2.4	U	2.4	U	0.240	U	P
Iron	33.3	U	33.3	U	33.3	U	59.4	B	3.330	U	P
Lead	1.3	U	1.3	U	1.3	U	1.3	U	0.247	B	P
Magnesium	178.3	U	178.3	U	178.3	U	178.3	U	17.830	U	P
Manganese	0.7	U	4.7	B	4.8	B	5.0	B	0.070	U	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.017	U	CV
Nickel	2.1	U	13.0	B	13.0	B	13.8	B	-0.266	B	P
Potassium	393.0	U	393.0	U	393.0	U	393.0	U	39.300	U	P
Selenium									0.363	B	P
Silver	2.2	U	2.2	U	2.2	U	2.2	U	0.220	U	P
Sodium	472.7	U	472.7	U	472.7	U	472.7	U	86.750	B	P
Thallium	5.7	U	5.7	U	5.7	U	5.7	U	-0.611	B	P
Vanadium	2.0	U	2.0	U	2.0	U	2.0	U	0.200	U	P
Zinc	1.0	U	1.0	U	1.0	U	1.0	U	0.186	B	P

USEPA - CLP

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Aluminum			23.6	U							P
Antimony			4.7	U							P
Arsenic			4.8	U							P
Barium			5.9	U							P
Beryllium			0.2	U							P
Cadmium			0.6	U							P
Calcium			182.1	U							P
Chromium			8.3	B							P
Cobalt			2.0	U							P
Copper			2.4	U							P
Iron			49.9	B							P
Lead			1.3	U							P
Magnesium			178.3	U							P
Manganese			4.7	B							P
Nickel			13.0	B							P
Potassium			393.0	U							P
Silver			2.2	U							P
Sodium			472.7	U							P
Thallium			5.7	U							P
Vanadium			2.0	U							P
Zinc			1.0	U							P

USEPA - CLP

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Manganese	0.7	U	0.7	U	0.7	U	0.7	U			P
Zinc	1.0	U	1.0	U	1.0	U	1.0	U			P

USEPA - CLP

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Manganese			0.7	U							P
Zinc			1.0	U							P

USEPA - CLP

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	
		1	2	3					
Selenium	2.1	2.9	1.7	2.7					
	B	B	U	B					P

USEPA - CLP

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Selenium			4.7	B							P

USEPA - CLP

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Aluminum	23.6	U	23.6	U	23.6	U	23.6	U			P
Antimony	4.7	U	4.7	U	4.7	U	4.7	U			P
Arsenic	4.8	U	4.8	U	4.8	U	4.8	U			P
Barium	5.9	U	5.9	U	5.9	U	5.9	U			P
Beryllium	0.2	B	0.2	U	0.2	B	0.3	B			P
Cadmium	0.6	U	0.6	U	0.6	U	0.6	U			P
Chromium	1.4	U	1.4	U	1.4	U	1.4	U			P
Cobalt	2.0	U	2.0	U	2.0	U	2.0	U			P
Copper	2.4	U	2.4	U	2.4	U	2.4	U			P
Iron	33.3	U	33.3	U	33.3	U	33.3	U			P
Lead	1.3	U	1.3	U	1.3	U	1.3	U			P
Manganese	0.7	U	0.7	U	0.7	U	0.7	U			P
Nickel	2.1	U	2.1	U	2.1	U	2.1	U			P
Silver	2.2	U	2.2	U	2.2	U	2.2	U			P
Thallium	5.7	U	5.7	U	5.7	U	5.7	U			P
Vanadium	2.0	U	2.0	U	2.0	U	2.0	U			P

USEPA - CLP

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Aluminum			23.6	U							P
Antimony			4.7	U							P
Arsenic			4.8	U							P
Barium			5.9	U							P
Beryllium			0.4	B							P
Cadmium			0.6	U							P
Chromium			1.4	U							P
Cobalt			2.0	U							P
Copper			2.4	U							P
Iron			33.3	U							P
Lead			1.3	U							P
Manganese			0.7	U							P
Nickel			2.1	U							P
Silver			2.2	U							P
Thallium			5.7	U							P
Vanadium			2.0	U							P

USEPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 4 ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	482740	493100	489700.0	101.4	494900	492500.0	102.0
Antimony	0	596	-1	618.5	103.8	-1	620.6	104.1
Arsenic	0	102	11	103.7	101.7	5	103.6	101.6
Barium	0	503	2	497.3	98.9	2	500.0	99.4
Beryllium	0	482	0	479.2	99.4	0	481.9	100.0
Cadmium	0	938	0	924.4	98.6	0	925.3	98.6
Calcium	500000	477840	488100	487400.0	102.0	489800	487500.0	102.0
Chromium	0	483	2	475.5	98.4	2	475.5	98.4
Cobalt	0	457	-1	455.3	99.6	-1	454.4	99.4
Copper	0	526	4	512.8	97.5	4	517.2	98.3
Iron	200000	191980	199900	197000.0	102.6	200600	197400.0	102.8
Lead	0	49	10	53.9	110.0	10	54.8	111.8
Magnesium	500000	521880	536600	536300.0	102.8	537900	537100.0	102.9
Manganese	0	474	1	467.9	98.7	1	468.8	98.9
Nickel	0	952	1	941.0	98.8	1	941.6	98.9
Potassium	0	0	32	34.4		-17	-13.0	
Silver	0	213	1	213.6	100.3	1	215.9	101.4
Sodium	0	0	-58	-61.3		-408	-150.8	
Thallium	0	89	-8	83.9	94.3	-5	88.4	99.3
Vanadium	0	478	3	467.4	97.8	2	468.2	97.9
Zinc	0	998	4	1001.0	100.3	5	1004.0	100.6

USEPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 4 ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Manganese	0	451	1	476.8	105.7	2	476.3	105.6
Zinc	0	951	6	994.3	104.6	6	988.4	103.9

USEPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLYT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 6 ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Selenium	0	48	2	55.0	114.6	6	52.2	108.8

USEPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 4 ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	477680	506600	506300.0	106.0	505400	507800.0	106.3
Antimony	0	575	-1	593.8	103.3	1	587.8	102.2
Arsenic	0	97	10	104.0	107.2	8	100.9	104.0
Barium	0	464	2	495.9	106.9	2	492.6	106.2
Beryllium	0	444	0	471.4	106.2	0	469.6	105.8
Cadmium	0	874	0	931.6	106.6	0	930.1	106.4
Chromium	0	451	4	478.0	106.0	3	473.3	104.9
Cobalt	0	434	-1	455.2	104.9	-1	444.0	102.3
Copper	0	482	4	513.4	106.5	3	511.5	106.1
Iron	200000	192500	200500	200600.0	104.2	196700	197900.0	102.8
Lead	0	41	-1	40.5	98.8	0	40.2	98.0
Manganese	0	451	1	479.4	106.3	2	478.7	106.1
Nickel	0	876	1	926.1	105.7	0	909.3	103.8
Silver	0	198	0	211.7	106.9	0	214.3	108.2
Thallium	0	83	-3	85.3	102.8	-3	85.7	103.3
Vanadium	0	464	0	493.3	106.3	0	488.7	105.3

USEPA - CLP

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLPDSSD14S

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Matrix (soil/water): SOILLevel (low/med): LOW% Solids for Sample: 39.3Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum		29087.4609	25395.4004	498.93	740.0		P
Antimony	75 - 125	52.8115	7.4914 B	124.73	36.3	N	P
Arsenic		138.1031	118.2957	9.98	198.5		P
Barium	75 - 125	1134.0620	617.9215	498.93	103.4		P
Beryllium	75 - 125	12.9746	1.2982	12.47	93.6		P
Cadmium	75 - 125	28.5636	11.9468	12.47	133.3	N	P
Chromium	75 - 125	58.3994	11.2134	49.89	94.6		P
Cobalt	75 - 125	131.2428	15.0726	124.73	93.1		P
Copper	75 - 125	152.4472	84.7927	62.37	108.5		P
Iron		45003.2500	46275.5117	249.46	-510.0		P
Lead		578.0073	486.4542	4.99	1834.7		P
Manganese		567.7793	577.0095	124.73	-7.4		P
Mercury		5.9240	4.1252	0.40	449.7		CV
Nickel	75 - 125	143.0425	26.4681	124.73	93.5		P
Selenium	75 - 125	4.4180	2.5096	2.49	76.6		P
Silver	75 - 125	12.8898	1.2877 B	12.47	93.0		P
Thallium	75 - 125	11.4254	1.4219 U	12.47	91.6		P
Vanadium	75 - 125	156.5883	39.5649	124.73	93.8		P
Zinc		2260.1411	2050.0920	124.73	168.4		P

Comments:

USEPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLPDSSD14A

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS

SDG No.: IDD001Matrix (soil/water): SOILLevel (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Aluminum		117000.00		101800.00		2000.0	760.0		P
Antimony		501.90		30.03	B	500.0	94.4		P
Arsenic		523.70		474.20		40.0	123.8		P
Barium		4452.00		2477.00		2000.0	98.8		P
Beryllium		53.31		5.20		50.0	96.2		P
Cadmium		96.60		47.89		50.0	97.4		P
Chromium		241.10		44.95		200.0	98.1		P
Cobalt		522.40		60.42		500.0	92.4		P
Copper		611.50		339.90		250.0	108.6		P
Iron		194100.00		185500.00		1000.0	860.0		P
Lead		2010.00		1950.00		20.0	300.0		P
Manganese		2881.00		2313.00		500.0	113.6		P
Nickel		579.50		106.10		500.0	94.7		P
Selenium		18.18		10.06		10.0	81.2		P
Silver		53.42		5.16	B	50.0	96.5		P
Thallium		47.86		5.70	U	50.0	95.7		P
Vanadium		649.00		158.60		500.0	98.1		P
Zinc		13980.00		8218.00		5000.0	115.2		P

Comments: _____

USEPA - CLP

6

DUPLICATES

SAMPLE NO.

IDOLPDSSD14D

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Matrix (soil/water): SOIL Level (low/med): LOW% Solids for Sample: 39.3 % Solids for Duplicate: 44.6Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		25395.4004		22454.2207		12.3		P
Antimony		7.4914	B	7.1222	B	5.1		P
Arsenic		118.2957		131.2179		10.4		P
Barium		617.9215		615.1774		0.4		P
Beryllium		1.2982		1.1735	B	10.1		P
Cadmium		11.9468		15.0152		22.8	*	P
Calcium		10664.5703		10844.1797		1.7		P
Chromium	2.5	11.2134		10.0409		11.0		P
Cobalt	12.5	15.0726		15.4767		2.6		P
Copper		84.7927		86.5639		2.1		P
Iron		46275.5117		43356.7813		6.5		P
Lead		486.4542		583.9944		18.2		P
Magnesium	1247.3	2993.5640		2691.7129		10.6		P
Manganese		577.0095		523.3748		9.7		P
Mercury		4.1252		4.4024		6.5		CV
Nickel	10.0	26.4681		24.3826		8.2		P
Potassium	1247.3	3529.9109		3255.5010		8.1		P
Selenium	1.2	2.5096		2.0254		21.4		P
Silver		1.2877	B	1.2448	B	3.4		P
Sodium		350.7459	B	373.4471	B	6.3		P
Thallium		1.4219	U	1.4219	U			P
Vanadium	12.5	39.5649		35.6733		10.3		P
Zinc		2050.0920		2213.9900		7.7		P

USEPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits		%R
Aluminum				200.0	198.4	160.0	240.0	99.2
Antimony				50.0	51.6	40.0	60.0	103.2
Arsenic				24.0	23.7	19.2	28.8	98.8
Barium				200.0	199.7	160.0	240.0	99.8
Beryllium				5.0	5.1	4.0	6.0	102.0
Cadmium				25.0	25.0	20.0	30.0	100.0
Calcium				2000.0	2092.0	1600.0	2400.0	104.6
Chromium				20.0	20.5	16.0	24.0	102.5
Cobalt				50.0	49.4	40.0	60.0	98.8
Copper				25.0	26.2	20.0	30.0	104.8
Iron				100.0	108.3	80.0	120.0	108.3
Lead				22.0	21.7	17.6	26.4	98.6
Magnesium				2000.0	2016.0	1600.0	2400.0	100.8
Manganese				50.0	50.8	40.0	60.0	101.6
Mercury				0.1	0.1	0.1	0.1	100.0
Nickel				50.0	49.4	40.0	60.0	98.8
Potassium				2000.0	2028.0	1600.0	2400.0	101.4
Selenium				21.0	20.5	16.8	25.2	97.6
Silver				25.0	22.8	20.0	30.0	91.2
Sodium				2000.0	2054.0	1600.0	2400.0	102.7
Thallium				25.0	24.0	20.0	30.0	96.0
Vanadium				50.0	51.1	40.0	60.0	102.2
Zinc				50.0	50.5	40.0	60.0	101.0

USEPA - CLP

9

ICP SERIAL DILUTIONS

SAMPLE NO.

IDOLPDSSD14L

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Matrix (soil/water): SOIL

Level (low/med): _____

LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ- ence	Q	M
Aluminum	101800.00		115400.00		13.4	E	P
Antimony	30.03	B	31.88	B	6.2		P
Arsenic	474.20		536.60		13.2	E	P
Barium	2477.00		2737.00		10.5	E	P
Beryllium	5.20		6.46	B	24.2		P
Cadmium	47.89		54.36		13.5	E	P
Calcium	42750.00		47830.00		11.9	E	P
Chromium	44.95		43.79	B	2.6		P
Cobalt	60.42		66.12	B	9.4		P
Copper	339.90		372.70		9.6		P
Iron	185500.00		207900.00		12.1	E	P
Lead	1950.00		2232.00		14.5	E	P
Magnesium	12000.00		13570.00	B	13.1	E	P
Manganese	2313.00		2582.00		11.6	E	P
Nickel	106.10		117.50	B	10.7	E	P
Potassium	14150.00		17340.00	B	22.5		P
Selenium	10.06		8.50	U	100.0		P
Silver	5.16	B	11.00	U	100.0		P
Sodium	1406.00	B	2363.50	U	100.0		P
Thallium	5.70	U	28.50	U			P
Vanadium	158.60		174.60	B	10.1	E	P
Zinc	8218.00		9052.00		10.1	E	P

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046

SAS No.: _____

SDG No.: IDD001

ICP ID Number: _____

Date: 7/1/2003Flame AA ID Number: Leeman Hydra AA

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Mercury	253.70		0.2	0.10	CV

Comments: _____

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 4 Date: 7/1/2003

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.215		200	23.6	P
Antimony	206.838		60	4.7	P
Arsenic	189.042		10	4.8	P
Barium	493.409		200	5.9	P
Beryllium	313.042		5	0.2	P
Cadmium	226.502		5	0.6	P
Calcium	317.933		5000	182.1	P
Chromium	267.716		10	1.4	P
Cobalt	228.616		50	2.0	P
Copper	324.754		25	2.4	P
Iron	271.441		100	33.3	P
Lead	220.353		3	1.3	P
Magnesium	279.078		5000	178.3	P
Manganese	257.610		15	0.7	P
Nickel	231.604		40	2.1	P
Potassium	766.491		5000	393.0	P
Silver	328.068		10	2.2	P
Sodium	330.232		5000	472.7	P
Thallium	190.864		10	5.7	P
Vanadium	292.402		50	2.0	P
Zinc	213.856		20	1.0	P

Comments: _____

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046

SAS No.: _____

SDG No.: IDD001ICP ID Number: TJA ICAP 6Date: 7/1/2003

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Selenium	196.026		5	1.7	P

Comments: _____

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 4 Date: 6/30/2003

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ba
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	-0.0000600	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0008950	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000330	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0004320
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0006300	0.0000000	0.0000090	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000200	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	-0.0000220	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0000200	0.0000000	-0.0000900	0.0000000	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000490	0.0000000	0.0000000
Zinc	213.86	0.0000250	0.0000000	0.0000630	0.0000000	0.0000000

Comments: _____

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 4 Date: 6/30/2003

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	Mn	Mo
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0072400
Antimony	206.84	0.0000000	0.0111600	0.0000000	0.0000000	-0.0024800
Arsenic	189.04	0.0000000	0.0004700	0.0000000	0.0000000	0.0013380
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0001150	0.0000000	0.0000000	0.0000000	0.0001350
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	-0.0016380
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.1059800	0.0000000	0.0000000	0.0000000	0.0036200
Lead	220.35	-0.0022600	-0.0001190	0.0000000	0.0000000	-0.0007540
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0004300	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	-0.0038600	0.0000000	0.0000000	-0.0042750
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	-0.0007920
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0032700	0.0002540	0.0000000	-0.008140	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	-0.0160000
Zinc	213.86	0.0000000	0.0000000	0.0003300	0.0000000	0.0000000

Comments: _____

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 4 Date: 6/30/2003

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Ni	Sb	Sn	V	Zn
Aluminum	308.22	0.0000000	0.0000000	0.1440400	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0006280	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	-0.000192	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0237000	0.0000000
Lead	220.35	0.0001240	-0.0002280	0.0000000	0.0005020	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0001660	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	-0.1212200	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.1177000
Thallium	190.86	0.0000000	0.0000000	0.0000000	0.0025400	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.86	0.0052400	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 6 Date: 10/1/2002

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ag
Aluminum	308.215	0.0000000	0.0000000	-0.0002180	0.0000000	0.0000000
Antimony	206.838	0.0000080	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000170	0.0000000	-0.0000590	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0000740	0.0000000	0.0000000
Cadmium	226.502	0.0000010	0.0000000	0.0000590	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000100	0.0000000	-0.0000200	0.0000060	0.0000000
Cobalt	228.616	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.441	0.0001740	0.0000000	0.0000000	-0.001587	0.0000000
Lead	220.353	-0.0000300	0.0000000	0.0000550	-0.000006	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000200	0.0000000
Molybdenum	202.030	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000520	0.0000000	0.0000000
Phosphorus	178.287	0.0000070	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	-0.0007500	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.232	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000240	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000080	0.0000000	-0.0001100	0.0000000	0.0000000
Tin	189.989	0.0000090	0.0000000	-0.0000750	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000140	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000030	0.0000040	0.0000000
Zinc	206.200	0.0000300	0.0000000	-0.0000600	0.0000000	0.0000000

Comments: _____

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 6 Date: 10/1/2002

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	B	Be	Cd	Co
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.441	0.0000000	0.0000000	0.0000000	0.0000000	-0.0082960
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.030	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	178.287	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001900
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.232	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	0.0000000	0.0000000	0.0002350
Tin	189.989	0.0000000	0.0000000	-0.0004370	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.200	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 6 Date: 10/1/2002

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Cr	Cu	Mn	Na	Ni
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0078510	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002840	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001750
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.441	0.0008900	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000800
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.030	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	178.287	-0.0007400	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.232	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0004500	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.200	0.0044570	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001

ICP ID Number: TJA ICAP 6 Date: 10/1/2002

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Pb	Sb	Se	Si	Tl
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.441	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.030	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	178.287	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.232	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	-0.0003500	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.200	0.0003900	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 6 Date: 10/1/2002

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		V	Zn			
Aluminum	308.215	0.0173200	0.0000000			
Antimony	206.838	-0.0012700	0.0000000			
Arsenic	189.042	-0.0002800	0.0000000			
Barium	493.409	0.0000000	0.0000000			
Beryllium	313.042	0.0004800	0.0000000			
Boron	249.678	0.0000000	0.0000000			
Cadmium	226.502	0.0000000	0.0000000			
Calcium	317.933	0.0000000	0.0000000			
Chromium	267.716	-0.0003600	0.0000000			
Cobalt	228.616	0.0000000	0.0000000			
Copper	324.754	0.0000000	0.0000000			
Iron	271.441	0.0081200	0.0000000			
Lead	220.353	-0.0000850	0.0000000			
Magnesium	279.079	0.0000000	0.0000000			
Manganese	257.610	0.0000000	0.0000000			
Molybdenum	202.030	0.0000000	0.0000000			
Nickel	231.604	0.0000000	0.0000000			
Phosphorus	178.287	0.0000000	0.0164830			
Potassium	766.491	0.0000000	0.0000000			
Selenium	196.026	0.0000000	0.0000000			
Silver	328.068	-0.0003350	0.0000000			
Sodium	330.232	-0.1479730	0.6581000			
Strontium	421.552	0.0000000	0.0000000			
Thallium	190.864	0.0014900	0.0000000			
Tin	189.989	0.0000000	0.0000000			
Titanium	334.941	0.0000000	0.0000000			
Vanadium	292.402	0.0000000	0.0000000			
Zinc	206.200	-0.0004730	0.0000000			

Comments: _____

ICP LINEAR RANGES (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 4 Date: 7/1/2003

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	10.00	1000000.0	P
Antimony	10.00	100000.0	P
Arsenic	10.00	5000.0	P
Barium	10.00	10000.0	P
Beryllium	10.00	5000.0	P
Cadmium	10.00	5000.0	P
Calcium	10.00	600000.0	P
Chromium	10.00	100000.0	P
Cobalt	10.00	100000.0	P
Copper	10.00	10000.0	P
Iron	10.00	1000000.0	P
Lead	10.00	10000.0	P
Magnesium	10.00	500000.0	P
Manganese	10.00	10000.0	P
Nickel	10.00	10000.0	P
Potassium	10.00	100000.0	P
Silver	10.00	2000.0	P
Sodium	10.00	100000.0	P
Thallium	10.00	5000.0	P
Vanadium	10.00	100000.0	P
Zinc	10.00	5000.0	P

Comments: _____

USEPA - CLP

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001ICP ID Number: TJA ICAP 6 Date: 7/1/2003

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Selenium	10.00	5000.0	P

Comments: _____

USEPA - CLP

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Method: CV

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
IDOLADPSD12	8/13/2003	0.60	100.0
IDOLPDPSD13	8/13/2003	0.62	100.0
IDOLPDSSD14	8/13/2003	0.66	100.0
IDOLPDSSD14100	8/13/2003	0.66	100.0
IDOLPDSSD14D	8/13/2003	0.63	100.0
IDOLPDSSD14S	8/13/2003	0.64	100.0
IDOLSTPSD07	8/13/2003	0.62	100.0
IDOLSTSSD05	8/13/2003	0.69	100.0
IDOLSTSSD06	8/13/2003	0.63	100.0
LCSS0813B	8/13/2003	1.00	100.0
PBS0813B	8/13/2003	0.60	100.0

USEPA - CLP

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001Method: P

EPA Sample No.	Preparation Date	Initial Weight (g)	Volume (mL)
IDOLADPSD12	8/20/2003	1.06	100.0
IDOLPDPSD13	8/20/2003	1.02	100.0
IDOLPDSSD14	8/20/2003	1.02	100.0
IDOLPDSSD14100	8/20/2003	1.02	100.0
IDOLPDSSD14D	8/20/2003	1.02	100.0
IDOLPDSSD14S	8/20/2003	1.02	100.0
IDOLSTPSD07	8/20/2003	1.03	100.0
IDOLSTSSD05	8/20/2003	1.00	100.0
IDOLSTSSD06	8/20/2003	1.03	100.0
LCSS0820D	8/20/2003	1.00	100.0
PBS0820D	8/20/2003	1.00	100.0

USEPA - CLP

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Instrument ID Number: TJA ICAP 4Method: PStart Date: 9/12/2003End Date: 9/12/2003

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V N
S0	1.00	1523		X	X	X	X	X	X		X	X	X	X	X		X		X		X		X	X	
S	1.00	1528		X										X											
S	1.00	1531			X	X									X								X		
S	1.00	1535					X	X	X		X	X	X				X	X			X			X	
LRS	1.00	1540		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
LRS	1.00	1545		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
LRS	1.00	1550		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
ICV	1.00	1555		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
ICB	1.00	1559		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
ICSA	1.00	1604		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
ICSAB	1.00	1609		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
CRI	1.00	1614		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
CCV	1.00	1618		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
CCB	1.00	1623		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
ZZZZZZ	1.00	1628																							
ZZZZZZ	1.00	1633																							
ZZZZZZ	1.00	1637																							
ZZZZZZ	1.00	1642																							
ZZZZZZ	5.00	1647																							
ZZZZZZ	1.00	1651																							
ZZZZZZ	1.00	1656																							
ZZZZZZ	1.00	1700																							
ZZZZZZ	1.00	1705																							
ZZZZZZ	1.00	1710																							
CCV	1.00	1714		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
CCB	1.00	1719		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
ZZZZZZ	1.00	1724																							
ZZZZZZ	1.00	1729																							
ZZZZZZ	1.00	1733																							
ZZZZZZ	1.00	1738																							
ZZZZZZ	5.00	1743																							
IDOLPDSSD14A	1.00	1747		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
ZZZZZZ	1.00	1752																							
ZZZZZZ	1.00	1757																							
ZZZZZZ	10.00	1801																							
ZZZZZZ	50.00	1806																							
CCV	1.00	1811		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	
CCB	1.00	1816		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	

USEPA - CLP

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Instrument ID Number: TJA ICAP 4Method: PStart Date: 9/12/2003End Date: 9/12/2003

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V	Z N	C N		
ZZZZZZ	10.00	1820																											
ZZZZZZ	10.00	1825																											
ZZZZZZ	10.00	1830																											
ZZZZZZ	1.00	1834																											
ZZZZZZ	10.00	1839																											
ICSA	1.00	1844		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	X				
ICSAB	1.00	1848		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	X				
CRI	1.00	1853		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	X				
CCV	1.00	1858		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	X				
CCB	1.00	1903		X	X	X	X	X	X		X	X	X	X	X		X	X			X		X	X	X				

USEPA - CLP

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Instrument ID Number: TJA ICAP 4Method: PStart Date: 9/12/2003End Date: 9/13/2003

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V	Z N	C N				
S0	1.00	2145														X										X					
S	1.00	2149																													
S	1.00	2153																													
S	1.00	2157														X										X					
LRS	1.00	2202														X										X					
LRS	1.00	2207														X										X					
LRS	1.00	2212														X										X					
ICV	1.00	2216														X										X					
ICB	1.00	2221														X										X					
ICSA	1.00	2226														X										X					
ICSAB	1.00	2231														X										X					
CRI	1.00	2235														X										X					
CCV	1.00	2240														X										X					
CCB	1.00	2245														X										X					
ZZZZZZ	1.00	2250																													
ZZZZZZ	1.00	2254																													
ZZZZZZ	1.00	2259																													
ZZZZZZ	1.00	2304																													
ZZZZZZ	5.00	2308																													
ZZZZZZ	1.00	2313																													
ZZZZZZ	1.00	2318																													
ZZZZZZ	1.00	2322																													
ZZZZZZ	1.00	2327																													
ZZZZZZ	1.00	2332																													
CCV	1.00	2336														X										X					
CCB	1.00	2341														X										X					
ZZZZZZ	1.00	2346																													
ZZZZZZ	1.00	2351																													
IDOLSTSSD05	10.00	2355																								X					
ZZZZZZ	1.00	0000																													
ZZZZZZ	5.00	0005																													
ZZZZZZ	1.00	0009																													
ZZZZZZ	1.00	0014																													
ZZZZZZ	1.00	0019																													
IDOLPDSSD14	10.00	0023																								X					
IDOLPDSSD14L	50.00	0028																								X					
CCV	1.00	0033														X										X					
CCB	1.00	0038														X										X					

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Instrument ID Number: TJA ICAP 4Method: PStart Date: 9/12/2003End Date: 9/13/2003

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V	Z N	C N		
IDOLPDSSD14A	10.00	0042																								X			
IDOLPDSSD14D	10.00	0047																								X			
IDOLPDSSD14S	10.00	0052																								X			
IDOLPDSSD14100	10.00	0056																								X			
IDOLADPSD12	10.00	0101															X												
ICSA	1.00	0106															X									X			
ICSAB	1.00	0110															X									X			
CRI	1.00	0115															X									X			
CCV	1.00	0120															X									X			
CCB	1.00	0125															X									X			

USEPA - CLP

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 8/14/2003End Date: 8/14/2003

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A L	N T	V L	Z N
S0	1.00	1654																X							
S0.2	1.00	1656																X							
S0.5	1.00	1658																X							
S1	1.00	1700																X							
S5	1.00	1701																X							
S10	1.00	1703																X							
ICV	1.00	1705																X							
ICB	1.00	1707																X							
CRA	1.00	1709																X							
CCV	1.00	1710																X							
CCB	1.00	1712																X							
ZZZZZZ	2.00	1714																							
ZZZZZZ	1.00	1716																							
ZZZZZZ	5.00	1718																							
ZZZZZZ	1.00	1719																							
PBS0813B	1.00	1721																X							
LCSS0813B	1.00	1723																X							
IDOLSTSSD05	1.00	1725																X							
IDOLPDSSD14	1.00	1727																X							
IDOLPDSSD14D	1.00	1728																X							
CCV	1.00	1730																X							
CCB	1.00	1732																X							
IDOLPDSSD14S	1.00	1734																X							
IDOLPDSSD14100	1.00	1736																X							
IDOLPDPSD13	1.00	1737																X							
IDOLADPSD12	1.00	1739																X							
IDOLSTPSD07	1.00	1741																X							
IDOLSTSSD06	1.00	1743																X							
ZZZZZZ	1.00	1745																							
ZZZZZZ	1.00	1746																							
ZZZZZZ	1.00	1749																							
CCV3	1.00	1751																X							
CCB3	1.00	1753																X							

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTON Contract: 23046
Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDD001
Instrument ID Number: TJA ICAP 4 Method: P
Start Date: 8/30/2003 End Date: 8/30/2003

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T L	V N	Z N	C N
S0	1.00	1728		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S	1.00	1733		X					X					X	X				X			X					
S	1.00	1737			X	X									X								X				
S	1.00	1741					X	X	X		X	X	X			X		X			X			X	X		
LRS	1.00	1747		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LRS	1.00	1752		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LRS	1.00	1757		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICV	1.00	1802		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICB	1.00	1808		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSA	1.00	1813		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSAB	1.00	1818		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRI	1.00	1823		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV	1.00	1828		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB	1.00	1833		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PBS0820D	1.00	1838		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LCSS0820D	1.00	1843		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1.00	1848																									
ZZZZZZ	1.00	1853																									
ZZZZZZ	5.00	1858																									
ZZZZZZ	1.00	1903																									
ZZZZZZ	1.00	1909																									
ZZZZZZ	1.00	1914																									
ZZZZZZ	1.00	1919																									
ZZZZZZ	1.00	1924																									
CCV	1.00	1929		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB	1.00	1934		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1.00	1939																									
ZZZZZZ	1.00	1944																									
IDOLSTSSD05	1.00	1949		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLPDSSD14	1.00	1954		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLPDSSD14L	5.00	1959		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1.00	2004																									
IDOLPDSSD14100	1.00	2009		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLPDPSD13	1.00	2014		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLADPSD12	1.00	2019		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLSTPSD07	1.00	2024		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV	1.00	2029		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB	1.00	2035		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTON Contract: 23046
 Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDD001
 Instrument ID Number: TJA ICAP 4 Method: P
 Start Date: 8/30/2003 End Date: 8/30/2003

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A G	N A	T L	V	Z N	C N
IDOLSTSSD06	1.00	2040		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	
IDOLPDSSD14D	1.00	2045		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X		
IDOLPDSSD14S	1.00	2050		X	X	X	X	X	X		X	X	X	X	X		X		X			X		X	X		
ICSA	1.00	2055		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	
ICSAB	1.00	2100		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	
CRI	1.00	2105		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	
CCV	1.00	2110		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	
CCB	1.00	2115		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Instrument ID Number: TJA ICAP 6Method: PStart Date: 9/7/2003End Date: 9/7/2003

EPA Sample No.	D/F	Time	% R	Analytes																									
				A	S	A	B	B	C	C	C	C	C	F	P	M	M	H	N	K	S	A	N	T	V	Z	C		
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	I		E	G	A	L		N	N		
S0	1.00	1624																			X								
S	1.00	1628																											
S	1.00	1631																			X								
S	1.00	1635																											
LRS	1.00	1640																			X								
LRS	1.00	1644																			X								
LRS	1.00	1648																			X								
ICV	1.00	1652																			X								
ICB	1.00	1657																			X								
ICSA	1.00	1701																			X								
ICSAB	1.00	1705																			X								
CRI	1.00	1709																			X								
CCV	1.00	1713																			X								
CCB	1.00	1717																			X								
PBS0820D	1.00	1721																			X								
LCSS0820D	1.00	1725																			X								
IDOLSTSSD05	1.00	1730																			X								
IDOLPDSSD14	1.00	1734																			X								
IDOLPDSSD14L	5.00	1738																			X								
IDOLPDSSD14A	1.00	1742																			X								
IDOLPDSSD14100	1.00	1746																			X								
IDOLPDPSD13	1.00	1750																			X								
IDOLADPSD12	1.00	1754																			X								
IDOLSTPSD07	1.00	1758																			X								
CCV	1.00	1802																			X								
CCB	1.00	1806																			X								
IDOLSTSSD06	1.00	1810																			X								
IDOLPDSSD14D	1.00	1814																			X								
IDOLPDSSD14S	1.00	1818																			X								
ZZZZZZ	1.00	1822																											
ZZZZZZ	1.00	1826																											
ZZZZZZ	1.00	1830																											
ZZZZZZ	1.00	1835																											
ZZZZZZ	1.00	1839																											
ZZZZZZ	1.00	1843																											
ZZZZZZ	1.00	1847																											
CCV	1.00	1851																			X								
CCB	1.00	1855																			X								

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDD001Instrument ID Number: TJA ICAP 6Method: PStart Date: 9/7/2003End Date: 9/7/2003

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
ZZZZZZ	1.00	1859																											
ZZZZZZ	1.00	1903																											
ZZZZZZ	1.00	1907																											
ZZZZZZ	5.00	1911																											
ZZZZZZ	1.00	1915																											
ZZZZZZ	1.00	1919																											
ZZZZZZ	1.00	1923																											
ICSA	1.00	1927																		X									
ICSAB	1.00	1932																		X									
CRI	1.00	1936																		X									
CCV	1.00	1940																		X									
CCB	1.00	1944																		X									



**Geotechnical Analysis
Sample Data Summary Package**

Particle Size of Soils by ASTM D422

Sample preparation method: **D2217**

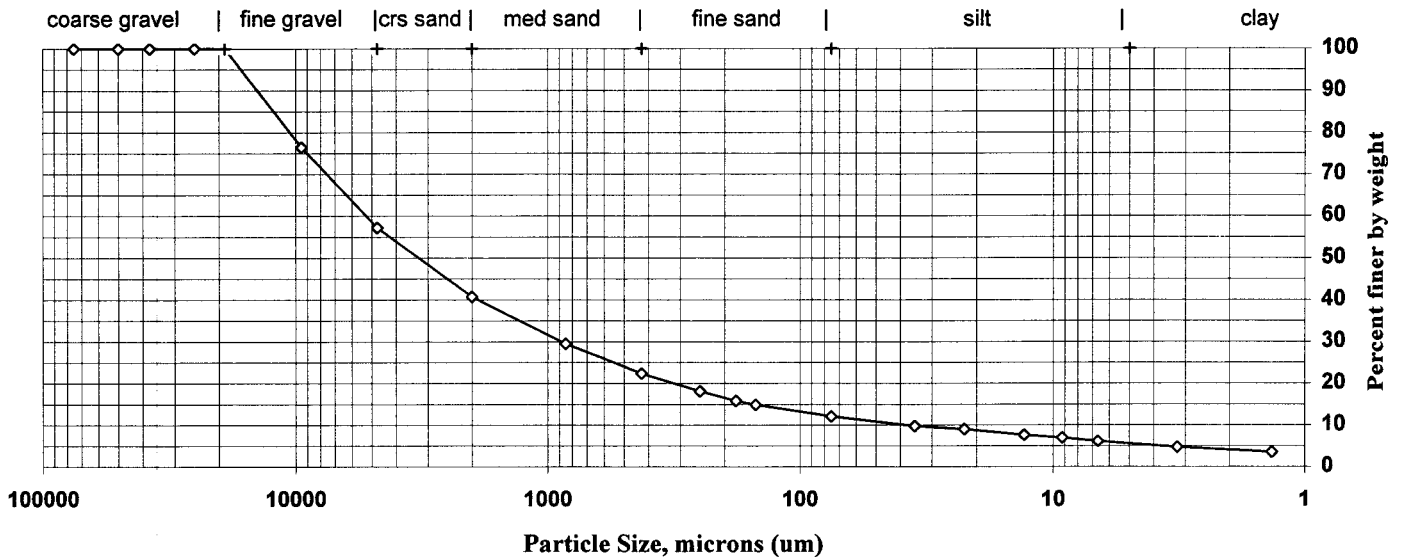
Client: EASEAT Project No.: 23046 ETR(s) #: 95004
 Client Code: EASEAT Job No.: N/A SDG(s): IDD001
 Date Received: 25-Jul-03 Start Date: 12-Aug-03 End Date: 21-Aug-03

Lab ID: 535843

Sample ID: SD05

Percent Solids: 76.1%
 Specific Gravity: 2.65 (assumed)
 Non-soil mass: 0.0%

Maximum Particle Size: 19 mm
 Shape (> #10): subangular
 Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	76.5	23.5
#4	4750	57.2	19.3
#10	2000	40.8	16.5
#20	850	29.5	11.2
#40	425	22.4	7.2
#60	250	18.1	4.3
#80	180	15.8	2.3
#100	150	14.9	0.9
#200	75	12.1	2.8
Hydrometer	35.1	9.8	2.4
	22.3	9.0	0.7
	13.0	7.6	1.4
	9.2	6.9	0.7
	6.6	6.1	0.8
	3.2	4.7	1.4
V	1.4	3.5	1.2

Soil Classification	Percent of Total Sample
Gravel	42.8
Sand	45.1
Coarse Sand	16.5
Medium Sand	18.4
Fine Sand	10.3
Silt	6.0
Clay	6.1

Dispersion Device: Mechanical mixer with a metal paddle.

Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

Sample preparation method: **D2217**

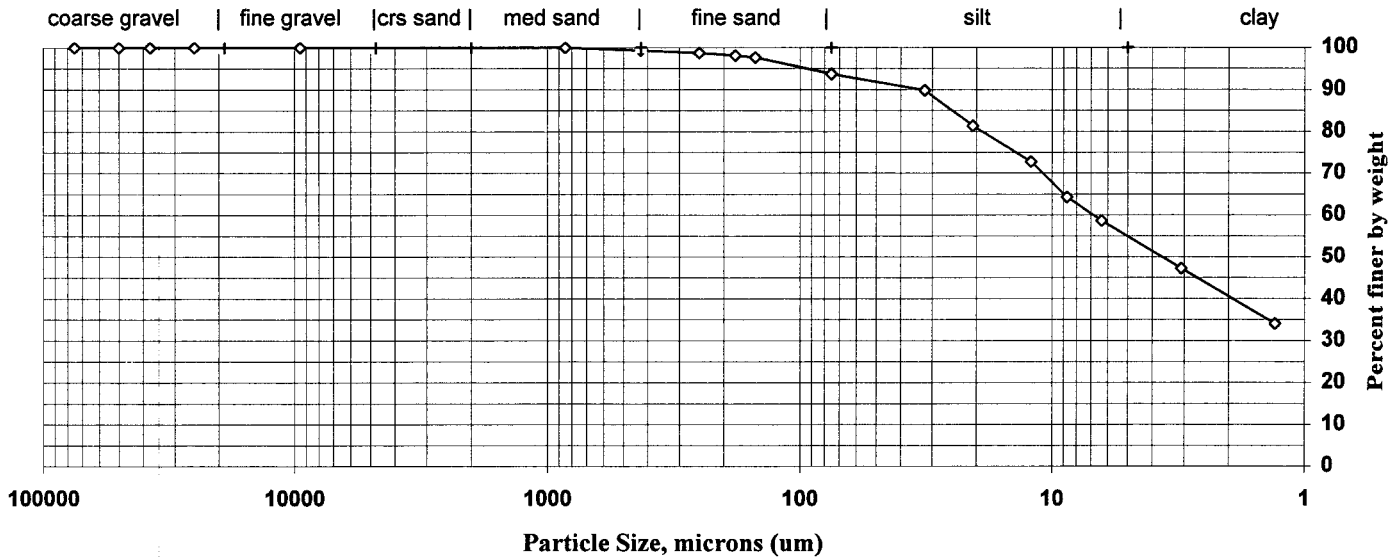
Client: EASEAT Project No.: 23046 ETR(s) #: 95004
 Client Code: EASEAT Job No.: N/A SDG(s): IDD001
 Date Received: 25-Jul-03 Start Date: 12-Aug-03 End Date: 21-Aug-03

Lab ID: 535844

Sample ID: SD14

Percent Solids: 43.6%
 Specific Gravity: 2.65 (assumed)
 Non-soil mass: 0.6%

Maximum Particle Size: Med sand
 Shape (> #10): N/A
 Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	100.0	0.0
#40	425	99.3	0.7
#60	250	98.7	0.6
#80	180	98.1	0.6
#100	150	97.6	0.4
#200	75	93.7	3.9
Hydrometer	32.2	89.8	3.9
	20.7	81.3	8.5
	12.1	72.8	8.5
	8.7	64.3	8.5
	6.3	58.6	5.7
	3.1	47.3	11.3
V	1.3	34.0	13.2

Soil Classification	Percent of Total Sample
Gravel	0.0
Sand	6.3
Coarse Sand	0.0
Medium Sand	0.7
Fine Sand	5.6
Silt	35.1
Clay	58.6

Dispersion Device: Mechanical mixer with a metal paddle.

Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

Sample preparation method: **D2217**

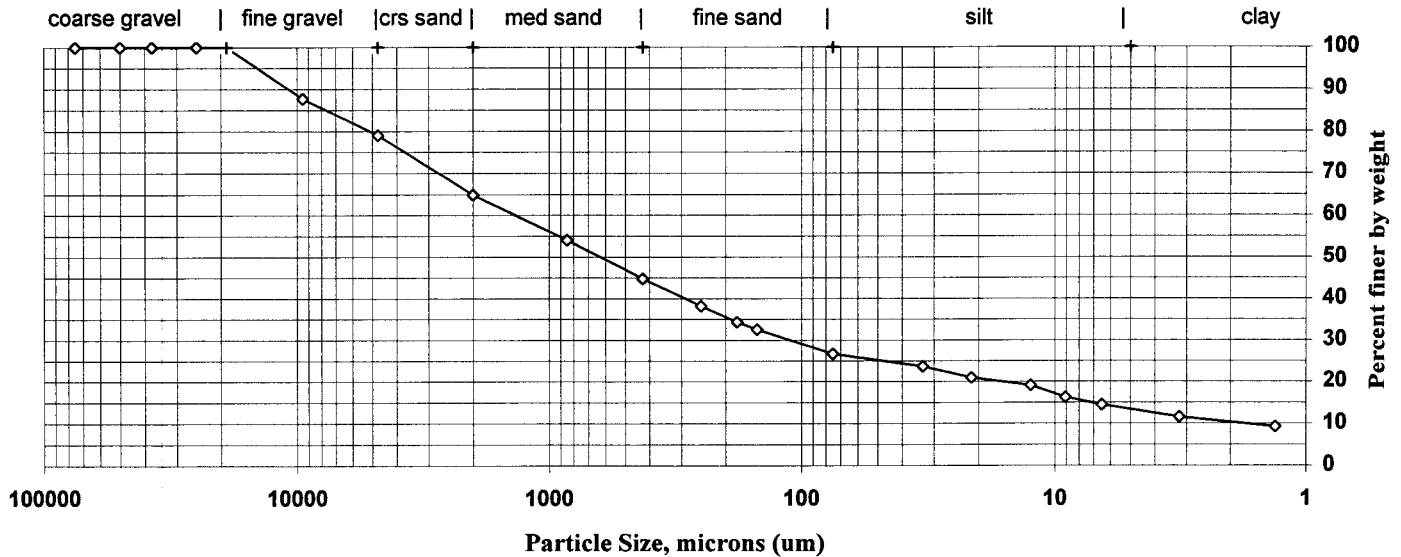
Client: EASEAT	Project No.: 23046	ETR(s) #: 95004
Client Code: EASEAT	Job No.: N/A	SDG(s): IDD001
Date Received: 25-Jul-03	Start Date: 12-Aug-03	End Date: 21-Aug-03

Lab ID: 535846

Sample ID: SD13

Percent Solids: 70.3%
Specific Gravity: 2.65 (assumed)
Non-soil mass: 0.0%

Maximum Particle Size: 19 mm
Shape (> #10): subangular
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	87.7	12.3
#4	4750	79.0	8.6
#10	2000	64.9	14.1
#20	850	54.1	10.8
#40	425	44.8	9.3
#60	250	38.3	6.5
#80	180	34.4	3.9
#100	150	32.6	1.8
#200	75	26.7	5.9
Hydrometer	33.2	23.7	3.0
	21.4	20.9	2.8
	12.5	19.1	1.8
	9.1	16.3	2.8
	6.5	14.5	1.8
	3.2	11.5	2.9
V	1.3	9.2	2.3

Soil Classification	Percent of Total Sample
Gravel	21.0
Sand	52.4
Coarse Sand	14.1
Medium Sand	20.1
Fine Sand	18.1
Silt	12.2
Clay	14.5

Dispersion Device: Mechanical mixer with a metal paddle.

Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

Sample preparation method: **D2217**

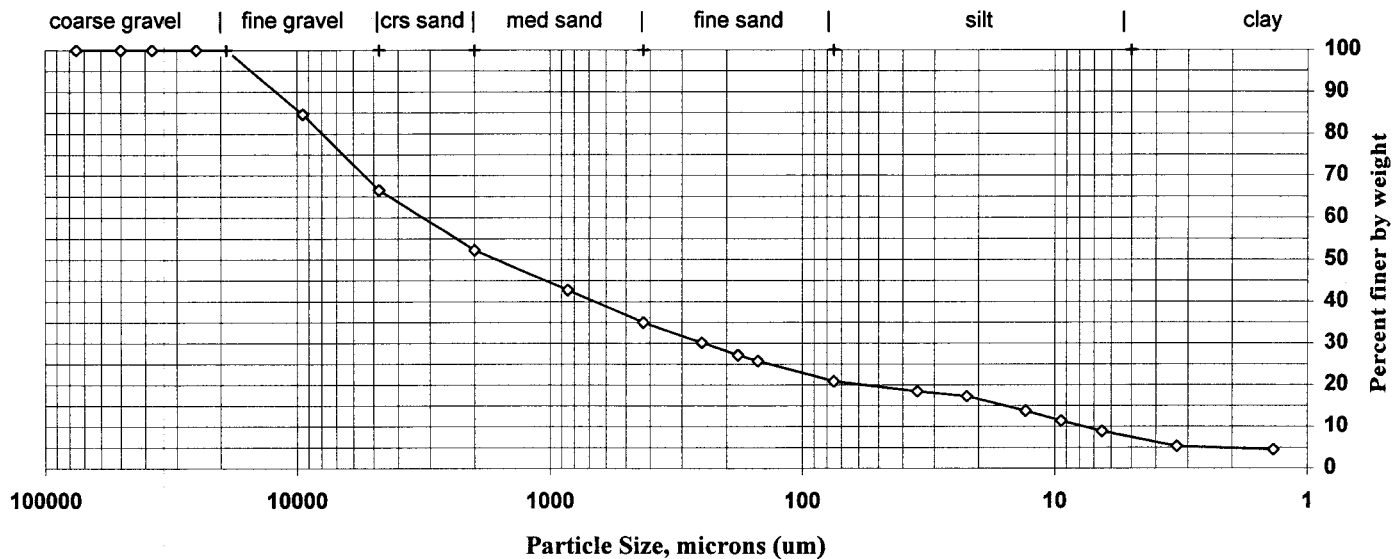
Client: EASEAT Project No.: 23046 ETR(s) #: 95004
 Client Code: EASEAT Job No.: N/A SDG(s): IDD001
 Date Received: 25-Jul-03 Start Date: 12-Aug-03 End Date: 21-Aug-03

Lab ID: 535847

Sample ID: SD12

Percent Solids: 62.6%
 Specific Gravity: 2.65 (assumed)
 Non-soil mass: 1.8%

Maximum Particle Size: 19 mm
 Shape (> #10): subangular
 Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	84.6	15.4
#4	4750	66.5	18.2
#10	2000	52.3	14.2
#20	850	42.7	9.6
#40	425	35.0	7.7
#60	250	30.1	4.9
#80	180	27.2	2.9
#100	150	25.8	1.4
#200	75	20.9	4.9
Hydrometer	35.0	18.5	2.4
	22.2	17.3	1.2
	13.0	13.8	3.5
	9.4	11.4	2.4
	6.5	8.8	2.6
	3.3	5.3	3.5
V	1.4	4.5	0.8

Soil Classification	Percent of Total Sample
Gravel	33.5
Sand	45.6
Coarse Sand	14.2
Medium Sand	17.3
Fine Sand	14.2
Silt	12.0
Clay	8.8

Dispersion Device: Mechanical mixer with a metal paddle.

Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

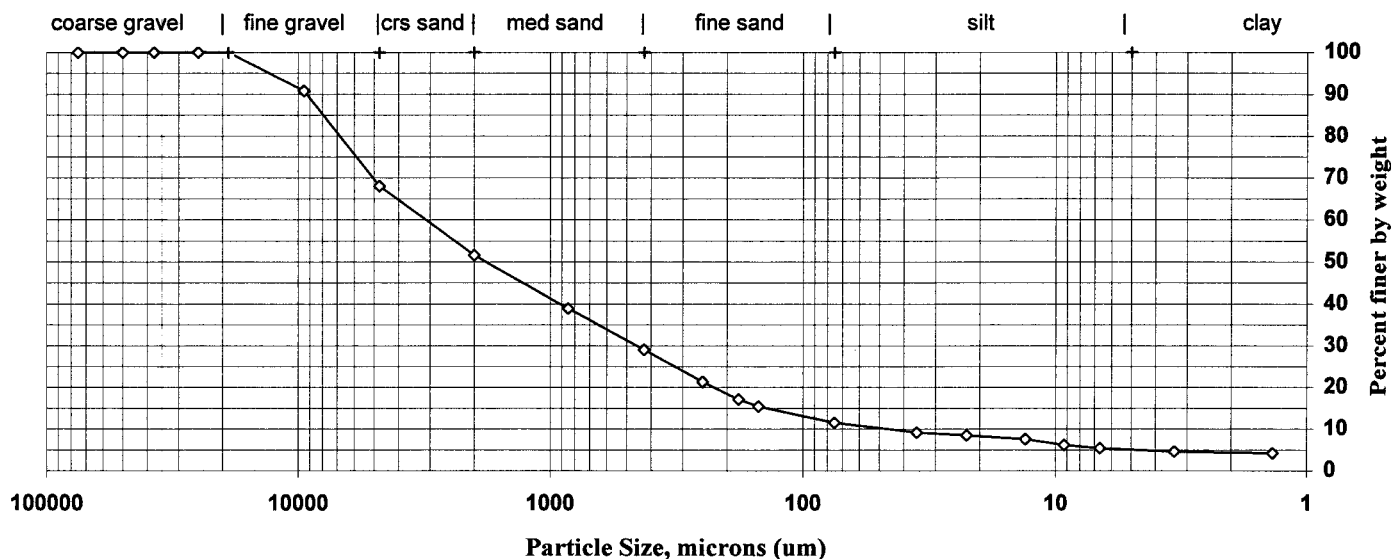
Sample preparation method: **D2217**

Client: EASEAT Project No.: 23046 ETR(s) #: 95004
 Client Code: EASEAT Job No.: N/A SDG(s): IDD001
 Date Received: 25-Jul-03 Start Date: 12-Aug-03 End Date: 21-Aug-03

Lab ID: 535848

Sample ID: SD07

Percent Solids: 73.1% Maximum Particle Size: 19 mm
 Specific Gravity: 2.65 (assumed) Shape (> #10): subangular
 Non-soil mass: 0.6% Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	90.8	9.2
#4	4750	68.0	22.8
#10	2000	51.6	16.4
#20	850	38.9	12.7
#40	425	29.0	9.8
#60	250	21.3	7.7
#80	180	17.1	4.2
#100	150	15.5	1.7
#200	75	11.5	3.9
Hydrometer	35.5	9.2	2.4
	22.5	8.4	0.7
	13.2	7.6	0.8
	9.2	6.2	1.4
	6.7	5.4	0.7
	3.4	4.6	0.8
V	1.4	4.2	0.4

Soil Classification	Percent of Total Sample
Gravel	32.0
Sand	56.5
Coarse Sand	16.4
Medium Sand	22.6
Fine Sand	17.5
Silt	6.1
Clay	5.4

Dispersion Device: Mechanical mixer with a metal paddle.

Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

Sample preparation method: **D2217**

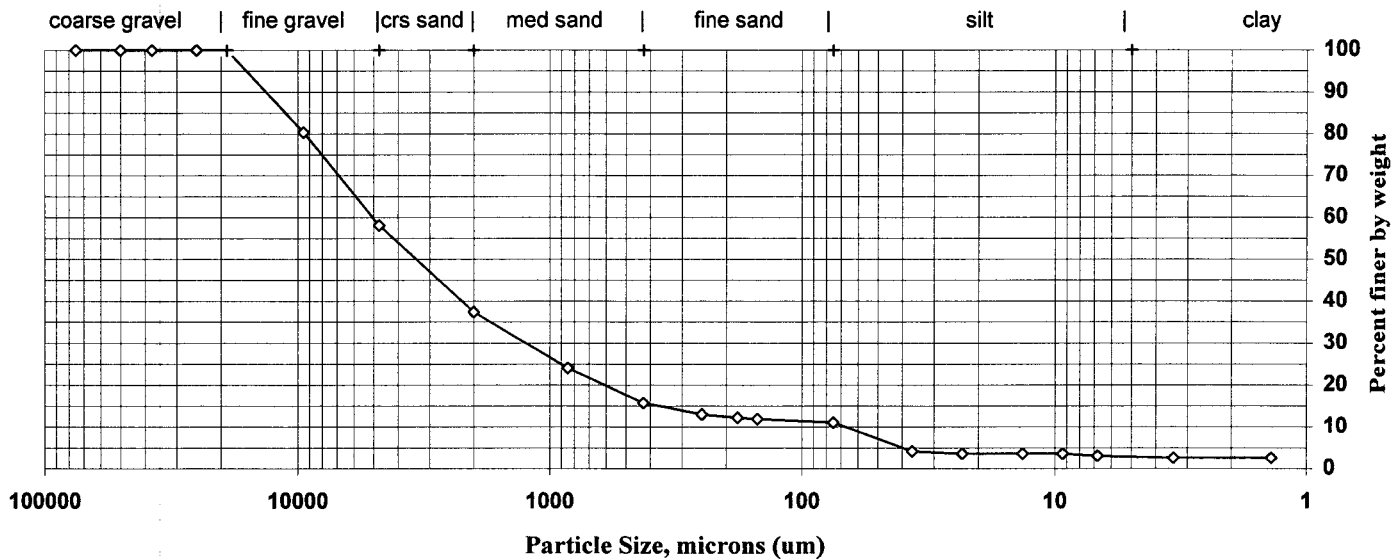
Client: EASEAT Project No.: 23046 ETR(s) #: 95004
 Client Code: EASEAT Job No.: N/A SDG(s): IDD001
 Date Received: 25-Jul-03 Start Date: 12-Aug-03 End Date: 21-Aug-03

Lab ID: 535849

Sample ID: SD06

Percent Solids: 84.9%
 Specific Gravity: 2.65 (assumed)
 Non-soil mass: 0.1%

Maximum Particle Size: 19 mm
 Shape (> #10): subangular
 Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	80.4	19.6
#4	4750	58.1	22.3
#10	2000	37.4	20.7
#20	850	24.1	13.3
#40	425	15.7	8.3
#60	250	13.0	2.7
#80	180	12.2	0.8
#100	150	11.9	0.3
#200	75	11.1	0.8
Hydrometer	36.5	4.2	6.9
	23.2	3.6	0.6
	13.4	3.6	0.0
	9.3	3.6	0.0
	6.8	3.1	0.6
	3.4	2.6	0.5
V	1.4	2.6	0.0

Soil Classification	Percent of Total Sample
Gravel	41.9
Sand	47.0
Coarse Sand	20.7
Medium Sand	21.6
Fine Sand	4.7
Silt	8.0
Clay	3.1

Dispersion Device: Mechanical mixer with a metal paddle.

Dispersion Period: 1 minute

**STL Burlington
Colchester, Vermont**

**Sample Data Summary
Package**

SDG: IDS001

September 23, 2003

Ms. Cathy Bohlke
EA Engineering
12011 Bellevue-Redmond Rd.
Suite 200
Bellevue, WA 98005

Re: Laboratory Project No. 23046
Case No. 23046; SDG: IDS001

Dear Ms. Bohlke:

Enclosed are the analytical results of samples received intact by Severn Trent Laboratories on July 26, 2003. Laboratory numbers have been assigned and designated as follows:

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Sample Date</u>	<u>Sample Matrix</u>
Received: 07/26/03 ETR No: 95023			
535893	IDOLWPSSS090.5	07/21/03	Soil
535894	IDOLWPSUS033.5	07/21/03	Soil
535895	IDOLWPSUS033.5SPLP	07/21/03	Extract
535896	IDOLWPSUS041.0	07/21/03	Soil
535897	IDOLTASSS110.5	07/22/03	Soil
535898	IDOLWPSSS010.5	07/22/03	Soil
535899	IDOLTASSS100.5	07/22/03	Soil
535900	IDOLWPSSS170.5	07/22/03	Soil
535901	IDOLWPSUS185.5	07/22/03	Soil
535902	IDOLWPSUS185.5SPLP	07/22/03	Extract
535903	IDOLBKSSS080.5	07/22/03	Soil
535903MS	IDOLBKSSS080.5MS	07/22/03	Soil
535903DP	IDOLBKSSS080.5REP	07/22/03	Soil
535904	IDOLBKSSS080.5SPLP	07/22/03	Extract
535904MS	IDOLBKSSS080.5SPLPMS	07/22/03	Extract
535904DP	IDOLBKSSS080.5SPLPREP	07/22/03	Extract
535905	IDOLWPSUS18100	07/22/03	Soil
535906	IDOLWPSUS18100SPLP	07/22/03	Extract
535907	IDOLTASSS190.3	07/22/03	Soil
535908	IDOLTASSS200.5	07/22/03	Soil
535909	IDOLTASUS201.0	07/23/03	Soil

Received: 07/26/03 ETR No: 95024

535911	IDOLWPSUS023.5	07/21/03	Soil
535912	IDOLWPSSS210.5	07/22/03	Soil

Severn Trent Laboratories, Inc.

STL Burlington • 208 South Park Drive, Suite 1, Colchester, VT 05446

Tel 802 655 1203 Fax 802 655 1248 • www.stl-inc.com

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Sample Date</u>	<u>Sample Matrix</u>
Received: 07/26/03 ETR No: 95024 (Cont.)			
535913	IDOLWPSSS030.5	07/21/03	Soil
535914	IDOLWPSSS030.5SPLP	07/21/03	Extract
535915	IDOLWPSSS020.5	07/21/03	Soil
535916	IDOLTASSS230.5	07/23/03	Soil

Due to reporting software limitations, sample identifications may have been truncated. In most instances only punctuation was removed. Please note that the "SPLP" suffix refers to the lab generated Synthetic Precipitation Leachate Procedure (SPLP) extract.

This narrative identifies anomalies that occurred during the analyses of samples in this delivery group. If there is no description following regarding a certain methodology requested on the chain-of-custody record, then there were no exceptions to the laboratory quality control criteria noted during that analysis.

Documentation that identifies the condition of the samples at the time of sample receipt and the issues arising at the time of sample log-in is included in the Sample Handling section of this submittal. Please note that the samples identified as IDOL-WP-SUS-04-1.0 and IDOL-TA-SUS-20-1.0 listed on the chain-of-custody form were not received. Two samples identified as IDOL-WP-SSS-04-1.0 and IDOL-TA-SUS-22-1.0 were received but not listed on the chain-of-custody form. These samples had the same collection dates and times as those listed on form but not received. The laboratory logged samples from the chain-of-custody form.

Metals by ICP / CVAA

The recoveries of antimony and selenium from the laboratory fortified aliquot of sample IDOLBKSSS080.5 were 16.7 percent and 44.3 percent, respectively. Corresponding sample results have been flagged with an "N". Recovery from the laboratory control samples proved acceptable. Recovery from the post digestate spike of this same sample proved acceptable.

Please note that the sample identified as IDOLWPSUS18100 displayed a slight negative interference (concentration less than 0 but greater than -10 ppb) for cadmium. Samples IDOLWPSSS090.5, IDOLWPSUS033.5, and IDOLTASUS201.0 displayed a more severe negative interference (concentration less than -10 but greater than -20 ppb) for cadmium.

The laboratory noted that the sample identified as IDOLWPSSS010.5 saturated the instrument during an initial analysis due to high concentrations of lead. The sample was reanalyzed at various dilutions and results have been reported from the 10x dilution. Please note that the sodium results, also reported from the 10x dilution analysis, indicate a severe negative interference.

Reportable concentrations of sodium were detected in one or more of the SPLP preparation blanks associated with this delivery group. The laboratory noted that the digestion preparation

blanks associated with the above samples did not contain metals in concentrations greater than their respective reporting limits.

Please note that not all elements were included in the matrix spiking solution for the SPLP extract. The routine protocol of spiking with only the Toxicity Characteristic Leachate Procedure (TCLP) / SEM elements was followed. The spiking solution thus contained arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver plus copper and zinc.

The percent difference between the original determination and serial dilution determination for aluminum (11.4%) in sample IDOLBKSSS080.5SPLP was above the control criteria of $\pm 10\%$. Matrix interference is suspected and results have been flagged with an "E" accordingly.

If there are any questions regarding this submittal, please contact Jeannine McCrumb at (802) 655-1203.

This report shall not be reproduced, except in full, without the written approval of the laboratory. This report is sequentially numbered starting with page 0001 and ending with page 0577.

I certify that this package is in compliance with the NELAC requirements, both technically and for completeness, for other than the conditions detailed above. The release of the data contained in this hardcopy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael F. Wheeler", with a stylized flourish at the end.

Michael F. Wheeler, Ph.D.
Laboratory Director

Enclosure
MFW/jtw/jmm

[illegible]

Report to:				Invoice to:				ANALYSIS REQUESTED				Lab Use Only			
Company: FA Eng				Company: SAME								Due Date:			
Address: 12011 Zellervue Rd, Richmond, WA 98005				Address: Zellervue Rd, WA 98005								Temp. of coolers when received (°):			
Contact: Cathy Bohrer				Contact: Cathy Bohrer								1 2 3 4 5			
Phone: (425) 451-7400				Phone: (425) 451-7400								Custody Seal N / Y			
Fax: (425) 451-7800				Fax: (425) 451-7800								Intact N / Y			
Contract/Quote:				Contract/Quote:								Screened For Radioactivity <input type="checkbox"/>			
Sampler's Name: Cath Bohrer				Sampler's Signature: Cath Bohrer											
Proj. No. 13890.09				Project Name: Ed City Mine											
Matrix: S				Date: 7/21 4:15				Identifying Marks of Sample(s): IDOL - WP - SSS - 09-0.5							
S				7/21 5:30				IDOL - WP - SUS - 03-3.5							
S				7/21 6:30				IDOL - WP - SUS - 04-1.0							
S				7/22 10:15				IDOL - TA - SSS - 11-0.5							
S				7/22 10:40				IDOL - WP - SSS - 01-0.5							
S				7/22 11:00				IDOL - TA - SSS - 10-0.5							
S				7/22 1:30				IDOL - WP - SSS - 17-0.5							
S				7/22 12:30				IDOL - WP - SUS - 18-5.5							
S				7/22 12:45				IDOL - RK - SSS - 08-0.5 (+MS)							
S				7/22 12:30				IDOL - WP - SUS - 18-100							

Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time		Remarks	
Cathy Bohrer		7/21/03		8:00		Cathy Bohrer		7/21/03		10:45		Time	
												Time	
												Time	

Client's delivery of samples constitutes acceptance of Severn Trent Laboratories terms and conditions contained in the Price Schedule.

STL cannot accept verbal changes. Please Fax written changes to (802) 655-1248

STL Burlington

208 South Park Drive, Suite 1

Colchester, VT 05446 Tel 802 655 1203

CHAIN OF CUSTODY RECORD

Report to: Company: <u>ETA ENGINEERING</u> Address: <u>12011 Bellevue - Redmond Rd</u> <u>Bellevue, WA - 98005</u> Contact: <u>Cathy Bohike</u> Phone: <u>425-451-7400</u> <u>F144</u> Fax: <u>425-451-7800</u> Contract/ Quote:		Invoice to: Company: <u>SAME</u> Address: Contact: Phone: Fax:		ANALYSIS REQUESTED Metals PH Cyanide		Lab Use Only Due Date: Temp. of coolers when received (C°): 1 2 3 4 5 Custody Seal Intact N / Y N / Y Screened For Radioactivity	
Project Name <u>3840-01 Idol City Mine</u>		Sampler's Name <u>C. Bohike</u>		Sampler's Signature <u>Cathy Bohike</u>		No/Type of Containers ²	
Matrix Date Time S 7/22 3:00 S 7/22 15:20 S 7/23 1:15 S 7/23 1:25	Identifying Marks of Sample(s) IDOL - TA - 555 - 19 - 0.3 IDOL - TA - 555 - 20 - 0.5 IDOL - TA - 555 - 20 - 1.0 IDOL - TA - 555 - 23 - 0.5	VOA A/G 1 Lt.	250 ml	P/O	Lab/Sample ID (Lab Use Only)		
Relinquished by: (Signature) <u>Cathy Bohike</u>		Date <u>7/25/02</u>	Time <u>8:00</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>7/26/02</u>	Time <u>1045</u>	Remarks
Relinquished by: (Signature)		Date	Time	Received by: (Signature)	Date	Time	Remarks
Relinquished by: (Signature)		Date	Time	Received by: (Signature)	Date	Time	Remarks
Matrix WW - Wastewater VOA - 40 ml vial		W - Water A/G - Amber / Or Glass 1 Liter	S - Soil 250 ml - Glass wide mouth	L - Liquid 250 ml - Glass wide mouth	A - Air bag P/O - Plastic or other	C - Charcoal Tube SL - Sludge	O - Oil



**Sample Data Summary Package
For Wet Chemistry**

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSSS090.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535893

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 93.4

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03	N/A	pH Units	1	0.00	3.2	
IN623	Solids, Percent	07/29/03		%	1.0		93.4	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSUS033.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535894

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 86.9

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	3.1	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		86.9	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSUS041.0

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535896

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 92.7

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	2.7	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		92.7	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLTASSS110.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535897

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 94.6

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	7.0	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		94.6	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSSS010.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535898

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 93.5

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	3.4	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		93.5	

WET CHEMISTRY

Sample Report Summary

IDOLTASSS100.5

SDG No.: IDS001

Lab Sample ID: 535899

.. Date Received: 07/26/03

% Solids: 95.8

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	6.6	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		95.8	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSSS170.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535900

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 89.8

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03	N/A	pH Units	1	0.00	3.7	
IN623	Solids, Percent	07/29/03		%	1.0		89.8	

WET CHEMISTRY

Sample Report Summary

IDOLWPSUS185.5

SDG No.: IDS001

Lab Sample ID: 535901

Date Received: 07/26/03

% Solids: 90.9

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	3.4	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		90.9	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLBKSSS080.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535903

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 93.7

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03	N/A	pH Units	1	0.00	6.7	
IN623	Solids, Percent	07/29/03		%	1.0		93.7	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSUS18100

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535905

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 87.9

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	3.4	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		87.9	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLTASSS190.3

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535907

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 69.3

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	7.0	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		69.3	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLTASSS200.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535908

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 93.7

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	6.4	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		93.7	

WET CHEMISTRY

Sample Report Summary

IDOLTASUS201.0

Contract:

SDG No.: IDS001

Case No.: 23046

Lab Sample ID: 535909

Client: EASEAT

Date Received: 07/26/03

% Solids: 91.2

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	7.0	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		91.2	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSUS023.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535911

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 87.0

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	4.2	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		87.0	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSSS210.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535912

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 95.4

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	8.5	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		95.4	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSSS030.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535913

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 90.6

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	3.6	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		90.6	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPSSS020.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535915

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 92.8

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	2.8	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		92.8	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLTASSS230.5

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535916

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 92.7

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
9040B	Corrosivity by pH	08/02/03		pH Units	1	0.00	7.6	
IN623	Solids, Percent	07/29/03	N/A	%	1.0		92.7	

WET CHEMISTRY

Duplicate Sample Report Summary

Client Sample No.

IDOLBKSSS080.5REP

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535903DP

Matrix: SOIL

Client: EASEAT

Date Received: 07/26/03

% Solids: 93.1

Method	Parameter	Analytical Run Date	Analytical Batch	Units	Sample Result Conc.	Sample Result Qual.	Duplicate Sample Result Conc.	Duplicate Sample Result Qual.	RPD*
9040B	Corrosivity by pH	08/02/03		pH Units	6.7		6.7		0
IN623	Solids, Percent	07/29/03	N/A	%	93.7		93.1		1

* Control Limit for RPD is +/- 20%, unless otherwise specified.

Printed on: 09/19/03 09:47 AM

WET CHEMISTRY

Laboratory Control Sample Report Summary

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Matrix: SOIL

Client: EASEAT

% Solids:

Lab Sample ID	Method	Parameter	Analytical Run Date	Analytical Batch	Units	LCS Conc.	True Value	% Recovery*
LCSPH0802A	9040B	Corrosivity by pH	08/02/03		pH Units	6.0	6.0000	100.5

* Control Limit for Percent Recovery is 80-120%, unless otherwise specified.

Printed on: 09/19/03 09:53 AM

WET CHEMISTRY
Laboratory Control Sample Duplicate
Report Summary

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDS001

Lab Code: STLVT

Case No.: 23046

Matrix: SOIL

Client: EASEAT

% Solids:

Lab Sample ID	Method	Parameter	Analytical Run Date	Analytical Batch	Units	LCSD Conc.	True Value	% Recovery*	RPD**
LCSDPH0802A	9040B	Corrosivity by pH	08/02/03		pH Units	6.0	6.0000	100.5	0

* Control Limit for Percent Recovery is 80-120%, unless otherwise specified.

** Control Limit for RPD is +/- 20%, unless otherwise specified.

Printed on: 09/19/03 09:53 AM



**Sample Data Summary Package
For Metals**

USEPA - CLP FORMS

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001SOW No.: ILM04.1

EPA Sample No.	Lab Sample ID.
IDOLBKSSS080.5	535903
IDOLBKSSS080.5D	535903DP
IDOLBKSSS080.5S	535903MS
IDOLTASSS100.5	535899
IDOLTASSS110.5	535897
IDOLTASSS190.3	535907
IDOLTASSS200.5	535908
IDOLTASSS230.5	535916
IDOLTASUS201.0	535909
IDOLWPSSS010.5	535898
IDOLWPSSS020.5	535915
IDOLWPSSS030.5	535913
IDOLWPSSS090.5	535893
IDOLWPSSS170.5	535900
IDOLWPSSS210.5	535912
IDOLWPSUS023.5	535911
IDOLWPSUS033.5	535894
IDOLWPSUS041.0	535896
IDOLWPSUS18100	535905
IDOLWPSUS185.5	535901

Were ICP interelement corrections applied? Yes/No YESWere ICP background corrections applied? Yes/No YESIf yes-were raw data generated before
application of background corrections? Yes/No NOComments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLBKSSS080.5

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535903Level (low/med): LOWDate Received: 07/26/03% Solids: 93.7Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13600			P
7440-36-0	Antimony	8.0	N		P
7440-38-2	Arsenic	107			P
7440-39-3	Barium	424			P
7440-41-7	Beryllium	0.64			P
7440-43-9	Cadmium	0.032	U		P
7440-70-2	Calcium	4010			P
7440-47-3	Chromium	6.3			P
7440-48-4	Cobalt	11.0			P
7440-50-8	Copper	27.4			P
7439-89-6	Iron	32400			P
7439-92-1	Lead	17.2			P
7439-95-4	Magnesium	1250			P
7439-96-5	Manganese	1410			P
7439-97-6	Mercury	0.10			CV
7440-02-0	Nickel	11.5			P
7440-09-7	Potassium	2880			P
7782-49-2	Selenium	2.0	N		P
7440-22-4	Silver	0.21	B		P
7440-23-5	Sodium	393	B		P
7440-28-0	Thallium	3.5			P
7440-62-2	Vanadium	30.9			P
7440-66-6	Zinc	102			P
57-12-5	Cyanide	0.50	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLTASSS100.5

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535899Level (low/med): LOWDate Received: 07/26/03% Solids: 95.8Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11100			P
7440-36-0	Antimony	1.8	B	N	P
7440-38-2	Arsenic	26.2			P
7440-39-3	Barium	358			P
7440-41-7	Beryllium	0.55			P
7440-43-9	Cadmium	0.031	U		P
7440-70-2	Calcium	3180			P
7440-47-3	Chromium	6.1			P
7440-48-4	Cobalt	9.2			P
7440-50-8	Copper	25.9			P
7439-89-6	Iron	26500			P
7439-92-1	Lead	35.6			P
7439-95-4	Magnesium	1850			P
7439-96-5	Manganese	701			P
7439-97-6	Mercury	0.48			CV
7440-02-0	Nickel	11.0			P
7440-09-7	Potassium	2650			P
7782-49-2	Selenium	1.6		N	P
7440-22-4	Silver	0.12	B		P
7440-23-5	Sodium	302	B		P
7440-28-0	Thallium	2.0			P
7440-62-2	Vanadium	23.9			P
7440-66-6	Zinc	78.2			P
57-12-5	Cyanide	0.46	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLTASSS110.5

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

Matrix (soil/water): SOIL Lab Sample ID: 535897

Level (low/med): LOW Date Received: 07/26/03

% Solids: 94.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13700			P
7440-36-0	Antimony	1.8	B	N	P
7440-38-2	Arsenic	44.9			P
7440-39-3	Barium	299			P
7440-41-7	Beryllium	0.69			P
7440-43-9	Cadmium	0.029	U		P
7440-70-2	Calcium	4770			P
7440-47-3	Chromium	9.5			P
7440-48-4	Cobalt	12.8			P
7440-50-8	Copper	31.9			P
7439-89-6	Iron	32600			P
7439-92-1	Lead	12.7			P
7439-95-4	Magnesium	3200			P
7439-96-5	Manganese	719			P
7439-97-6	Mercury	0.22			CV
7440-02-0	Nickel	16.7			P
7440-09-7	Potassium	2300			P
7782-49-2	Selenium	1.7		N	P
7440-22-4	Silver	0.11	B		P
7440-23-5	Sodium	219	B		P
7440-28-0	Thallium	2.5			P
7440-62-2	Vanadium	34.3			P
7440-66-6	Zinc	74.8			P
57-12-5	Cyanide	0.50	U		AS

Color Before: brown Clarity Before: _____ Texture: mediumColor After: yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLTASSS190.3

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535907Level (low/med): LOWDate Received: 07/26/03% Solids: 69.3Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13800			P
7440-36-0	Antimony	2.9	B	N	P
7440-38-2	Arsenic	87.3			P
7440-39-3	Barium	818			P
7440-41-7	Beryllium	0.85			P
7440-43-9	Cadmium	0.042	U		P
7440-70-2	Calcium	6640			P
7440-47-3	Chromium	7.8			P
7440-48-4	Cobalt	15.2			P
7440-50-8	Copper	36.4			P
7439-89-6	Iron	45900			P
7439-92-1	Lead	30.7			P
7439-95-4	Magnesium	2370			P
7439-96-5	Manganese	740			P
7439-97-6	Mercury	0.42			CV
7440-02-0	Nickel	17.3			P
7440-09-7	Potassium	2530			P
7782-49-2	Selenium	2.5		N	P
7440-22-4	Silver	0.19	B		P
7440-23-5	Sodium	248	B		P
7440-28-0	Thallium	3.3			P
7440-62-2	Vanadium	32.3			P
7440-66-6	Zinc	264			P
57-12-5	Cyanide	0.71	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLTASSS200.5

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535908Level (low/med): LOWDate Received: 07/26/03% Solids: 93.7Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15700			P
7440-36-0	Antimony	1.7	B	N	P
7440-38-2	Arsenic	39.8			P
7440-39-3	Barium	330			P
7440-41-7	Beryllium	0.68			P
7440-43-9	Cadmium	0.030	U		P
7440-70-2	Calcium	3430			P
7440-47-3	Chromium	10.7			P
7440-48-4	Cobalt	21.5			P
7440-50-8	Copper	43.4			P
7439-89-6	Iron	36600			P
7439-92-1	Lead	12.4			P
7439-95-4	Magnesium	3210			P
7439-96-5	Manganese	1450			P
7439-97-6	Mercury	0.060			CV
7440-02-0	Nickel	26.8			P
7440-09-7	Potassium	2410			P
7782-49-2	Selenium	2.0		N	P
7440-22-4	Silver	0.20	B		P
7440-23-5	Sodium	297	B		P
7440-28-0	Thallium	2.9			P
7440-62-2	Vanadium	35.8			P
7440-66-6	Zinc	104			P
57-12-5	Cyanide	0.53	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLTASSS230.5

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535916Level (low/med): LOWDate Received: 07/26/03% Solids: 92.7Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13000			P
7440-36-0	Antimony	1.4	B	N	P
7440-38-2	Arsenic	198			P
7440-39-3	Barium	716			P
7440-41-7	Beryllium	0.51			P
7440-43-9	Cadmium	0.056	U		P
7440-70-2	Calcium	3140			P
7440-47-3	Chromium	7.3			P
7440-48-4	Cobalt	11.6			P
7440-50-8	Copper	37.5			P
7439-89-6	Iron	23900			P
7439-92-1	Lead	27.5			P
7439-95-4	Magnesium	1860			P
7439-96-5	Manganese	557			P
7439-97-6	Mercury	0.15			CV
7440-02-0	Nickel	14.8			P
7440-09-7	Potassium	1590			P
7782-49-2	Selenium	0.32	U	N	P
7440-22-4	Silver	0.21	U		P
7440-23-5	Sodium	63.0	B		P
7440-28-0	Thallium	0.53	U		P
7440-62-2	Vanadium	27.2			P
7440-66-6	Zinc	54.5			P
57-12-5	Cyanide	0.52	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: pale yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLTASUS201.0

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

Matrix (soil/water): SOIL Lab Sample ID: 535909

Level (low/med): LOW Date Received: 07/26/03

% Solids: 91.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5290			P
7440-36-0	Antimony	2.7	B	N	P
7440-38-2	Arsenic	68.1			P
7440-39-3	Barium	820			P
7440-41-7	Beryllium	0.61			P
7440-43-9	Cadmium	0.032	U		P
7440-70-2	Calcium	4760			P
7440-47-3	Chromium	3.5			P
7440-48-4	Cobalt	12.5			P
7440-50-8	Copper	18.8			P
7439-89-6	Iron	38800			P
7439-92-1	Lead	13.0			P
7439-95-4	Magnesium	809			P
7439-96-5	Manganese	1010			P
7439-97-6	Mercury	0.35			CV
7440-02-0	Nickel	9.9			P
7440-09-7	Potassium	2330			P
7782-49-2	Selenium	2.3		N	P
7440-22-4	Silver	0.096	U		P
7440-23-5	Sodium	146	B		P
7440-28-0	Thallium	3.3			P
7440-62-2	Vanadium	24.4			P
7440-66-6	Zinc	91.0			P
57-12-5	Cyanide	0.51	U		AS

Color Before: brown Clarity Before: _____ Texture: medium

Color After: yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSSS010.5

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

Matrix (soil/water): SOIL Lab Sample ID: 535898

Level (low/med): LOW Date Received: 07/26/03

% Solids: 93.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2590			P
7440-36-0	Antimony	24.6		N	P
7440-38-2	Arsenic	847			P
7440-39-3	Barium	2060			P
7440-41-7	Beryllium	0.021	U		P
7440-43-9	Cadmium	27.1			P
7440-70-2	Calcium	992			P
7440-47-3	Chromium	1.2			P
7440-48-4	Cobalt	1.9	B		P
7440-50-8	Copper	167			P
7439-89-6	Iron	19900			P
7439-92-1	Lead	25300			P
7439-95-4	Magnesium	80.2	B		P
7439-96-5	Manganese	74.3			P
7439-97-6	Mercury	103			CV
7440-02-0	Nickel	2.3	B		P
7440-09-7	Potassium	2270			P
7782-49-2	Selenium	2.5		N	P
7440-22-4	Silver	45.0			P
7440-23-5	Sodium	225	U		P
7440-28-0	Thallium	14.5			P
7440-62-2	Vanadium	5.4			P
7440-66-6	Zinc	3510			P
57-12-5	Cyanide	0.52	U		AS

Color Before: brown Clarity Before: _____ Texture: mediumColor After: yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSSS020.5

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535915Level (low/med): LOWDate Received: 07/26/03% Solids: 92.8Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2710			P
7440-36-0	Antimony	11.6		N	P
7440-38-2	Arsenic	114			P
7440-39-3	Barium	1770			P
7440-41-7	Beryllium	0.15	B		P
7440-43-9	Cadmium	0.96			P
7440-70-2	Calcium	3540			P
7440-47-3	Chromium	0.59	B		P
7440-48-4	Cobalt	1.3	B		P
7440-50-8	Copper	17.3			P
7439-89-6	Iron	17100			P
7439-92-1	Lead	1360			P
7439-95-4	Magnesium	255	B		P
7439-96-5	Manganese	88.6			P
7439-97-6	Mercury	1.7			CV
7440-02-0	Nickel	1.3	B		P
7440-09-7	Potassium	1850			P
7782-49-2	Selenium	0.56		N	P
7440-22-4	Silver	2.4			P
7440-23-5	Sodium	167	B		P
7440-28-0	Thallium	0.96	B		P
7440-62-2	Vanadium	5.3			P
7440-66-6	Zinc	218			P
57-12-5	Cyanide	0.53	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: pale yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSSS030.5

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535913Level (low/med): LOWDate Received: 07/26/03% Solids: 90.6Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2270			P
7440-36-0	Antimony	1.7	B	N	P
7440-38-2	Arsenic	43.7			P
7440-39-3	Barium	533			P
7440-41-7	Beryllium	0.21	B		P
7440-43-9	Cadmium	0.064	U		P
7440-70-2	Calcium	17200			P
7440-47-3	Chromium	0.46	B		P
7440-48-4	Cobalt	3.6	B		P
7440-50-8	Copper	13.1			P
7439-89-6	Iron	25600			P
7439-92-1	Lead	46.6			P
7439-95-4	Magnesium	254	B		P
7439-96-5	Manganese	201			P
7439-97-6	Mercury	0.46			CV
7440-02-0	Nickel	2.2	B		P
7440-09-7	Potassium	1930			P
7782-49-2	Selenium	0.81		N	P
7440-22-4	Silver	0.23	U		P
7440-23-5	Sodium	130	B		P
7440-28-0	Thallium	0.87	B		P
7440-62-2	Vanadium	5.6			P
7440-66-6	Zinc	45.1			P
57-12-5	Cyanide	0.55	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: pale yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSSS090.5

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535893Level (low/med): LOWDate Received: 07/26/03% Solids: 93.4Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1920			P
7440-36-0	Antimony	2.3	B	N	P
7440-38-2	Arsenic	43.8			P
7440-39-3	Barium	573			P
7440-41-7	Beryllium	0.11	B		P
7440-43-9	Cadmium	0.029	U		P
7440-70-2	Calcium	8400			P
7440-47-3	Chromium	1.8			P
7440-48-4	Cobalt	4.1	B		P
7440-50-8	Copper	26.0			P
7439-89-6	Iron	33900			P
7439-92-1	Lead	21.1			P
7439-95-4	Magnesium	294	B		P
7439-96-5	Manganese	115			P
7439-97-6	Mercury	0.28			CV
7440-02-0	Nickel	4.4			P
7440-09-7	Potassium	2100			P
7782-49-2	Selenium	2.1		N	P
7440-22-4	Silver	0.095	B		P
7440-23-5	Sodium	148	B		P
7440-28-0	Thallium	1.9			P
7440-62-2	Vanadium	5.6			P
7440-66-6	Zinc	32.1			P
57-12-5	Cyanide	0.49	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSSS170.5

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535900Level (low/med): LOWDate Received: 07/26/03% Solids: 89.8Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2050			P
7440-36-0	Antimony	4.1	B	N	P
7440-38-2	Arsenic	137			P
7440-39-3	Barium	590			P
7440-41-7	Beryllium	0.061	B		P
7440-43-9	Cadmium	0.031	U		P
7440-70-2	Calcium	671			P
7440-47-3	Chromium	1.1			P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	24.7			P
7439-89-6	Iron	17900			P
7439-92-1	Lead	10.9			P
7439-95-4	Magnesium	214	B		P
7439-96-5	Manganese	44.5			P
7439-97-6	Mercury	1.0			CV
7440-02-0	Nickel	5.3			P
7440-09-7	Potassium	1260			P
7782-49-2	Selenium	1.8		N	P
7440-22-4	Silver	0.093	U		P
7440-23-5	Sodium	116	B		P
7440-28-0	Thallium	0.83	B		P
7440-62-2	Vanadium	8.4			P
7440-66-6	Zinc	22.0			P
57-12-5	Cyanide	0.53	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSSS210.5

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

Matrix (soil/water): SOIL Lab Sample ID: 535912

Level (low/med): LOW Date Received: 07/26/03

% Solids: 95.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3140			P
7440-36-0	Antimony	6.5		N	P
7440-38-2	Arsenic	961			P
7440-39-3	Barium	26.1			P
7440-41-7	Beryllium	0.50			P
7440-43-9	Cadmium	0.057	U		P
7440-70-2	Calcium	44700			P
7440-47-3	Chromium	0.81	B		P
7440-48-4	Cobalt	7.4			P
7440-50-8	Copper	23.6			P
7439-89-6	Iron	44700			P
7439-92-1	Lead	11.5			P
7439-95-4	Magnesium	14300			P
7439-96-5	Manganese	2740			P
7439-97-6	Mercury	2.0			CV
7440-02-0	Nickel	5.4			P
7440-09-7	Potassium	1730			P
7782-49-2	Selenium	0.32	U	N	P
7440-22-4	Silver	0.21	U		P
7440-23-5	Sodium	61.4	B		P
7440-28-0	Thallium	0.54	U		P
7440-62-2	Vanadium	15.2			P
7440-66-6	Zinc	87.7			P
57-12-5	Cyanide	0.49	U		AS

Color Before: brown Clarity Before: _____ Texture: medium

Color After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSUS023.5

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

Matrix (soil/water): SOIL Lab Sample ID: 535911

Level (low/med): LOW Date Received: 07/26/03

% Solids: 87.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10200			P
7440-36-0	Antimony	1.9	B	N	P
7440-38-2	Arsenic	49.5			P
7440-39-3	Barium	438			P
7440-41-7	Beryllium	0.69			P
7440-43-9	Cadmium	9.0			P
7440-70-2	Calcium	3000			P
7440-47-3	Chromium	5.1			P
7440-48-4	Cobalt	13.1			P
7440-50-8	Copper	33.3			P
7439-89-6	Iron	31700			P
7439-92-1	Lead	102			P
7439-95-4	Magnesium	1780			P
7439-96-5	Manganese	1490			P
7439-97-6	Mercury	0.37			CV
7440-02-0	Nickel	16.9			P
7440-09-7	Potassium	2050			P
7782-49-2	Selenium	0.37	U	N	P
7440-22-4	Silver	0.24	U		P
7440-23-5	Sodium	109	B		P
7440-28-0	Thallium	0.62	U		P
7440-62-2	Vanadium	24.7			P
7440-66-6	Zinc	1130			P
57-12-5	Cyanide	0.46	U		AS

Color Before: brown Clarity Before: _____ Texture: medium

Color After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSUS033.5

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

Matrix (soil/water): SOIL Lab Sample ID: 535894

Level (low/med): LOW Date Received: 07/26/03

% Solids: 86.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1740			P
7440-36-0	Antimony	2.3	B	N	P
7440-38-2	Arsenic	37.3			P
7440-39-3	Barium	361			P
7440-41-7	Beryllium	0.042	B		P
7440-43-9	Cadmium	0.030	U		P
7440-70-2	Calcium	24600			P
7440-47-3	Chromium	2.3			P
7440-48-4	Cobalt	2.6	B		P
7440-50-8	Copper	10.5			P
7439-89-6	Iron	42300			P
7439-92-1	Lead	11.5			P
7439-95-4	Magnesium	292	B		P
7439-96-5	Manganese	53.5			P
7439-97-6	Mercury	0.44			CV
7440-02-0	Nickel	3.0	B		P
7440-09-7	Potassium	1760			P
7782-49-2	Selenium	2.8		N	P
7440-22-4	Silver	0.089	U		P
7440-23-5	Sodium	181	B		P
7440-28-0	Thallium	2.2			P
7440-62-2	Vanadium	10.1			P
7440-66-6	Zinc	30.5			P
57-12-5	Cyanide	0.58	U		AS

Color Before: brown Clarity Before: _____ Texture: medium

Color After: yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSUS041.0

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

Matrix (soil/water): SOIL Lab Sample ID: 535896

Level (low/med): LOW Date Received: 07/26/03

% Solids: 92.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1180			P
7440-36-0	Antimony	1.7	B	N	P
7440-38-2	Arsenic	42.2			P
7440-39-3	Barium	391			P
7440-41-7	Beryllium	0.019	U		P
7440-43-9	Cadmium	0.74			P
7440-70-2	Calcium	1870			P
7440-47-3	Chromium	0.29	B		P
7440-48-4	Cobalt	0.23	B		P
7440-50-8	Copper	3.7			P
7439-89-6	Iron	3690			P
7439-92-1	Lead	452			P
7439-95-4	Magnesium	94.4	B		P
7439-96-5	Manganese	19.8			P
7439-97-6	Mercury	3.3			CV
7440-02-0	Nickel	0.19	U		P
7440-09-7	Potassium	1010			P
7782-49-2	Selenium	0.36	B	N	P
7440-22-4	Silver	1.7			P
7440-23-5	Sodium	52.9	B		P
7440-28-0	Thallium	0.27	U		P
7440-62-2	Vanadium	0.98	B		P
7440-66-6	Zinc	83.1			P
57-12-5	Cyanide	0.50	U		AS

Color Before: brown Clarity Before: _____ Texture: mediumColor After: yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSUS18100

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535905Level (low/med): LOWDate Received: 07/26/03% Solids: 87.9Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3510			P
7440-36-0	Antimony	3.0	B	N	P
7440-38-2	Arsenic	184			P
7440-39-3	Barium	447			P
7440-41-7	Beryllium	0.23	B		P
7440-43-9	Cadmium	0.034	U		P
7440-70-2	Calcium	5500			P
7440-47-3	Chromium	1.7			P
7440-48-4	Cobalt	2.9	B		P
7440-50-8	Copper	15.9			P
7439-89-6	Iron	32600			P
7439-92-1	Lead	23.1			P
7439-95-4	Magnesium	356	B		P
7439-96-5	Manganese	89.0			P
7439-97-6	Mercury	1.3			CV
7440-02-0	Nickel	2.6	B		P
7440-09-7	Potassium	2830			P
7782-49-2	Selenium	2.6		N	P
7440-22-4	Silver	0.16	B		P
7440-23-5	Sodium	253	B		P
7440-28-0	Thallium	3.0			P
7440-62-2	Vanadium	28.2			P
7440-66-6	Zinc	80.6			P
57-12-5	Cyanide	0.53	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSUS185.5

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Matrix (soil/water): SOILLab Sample ID: 535901Level (low/med): LOWDate Received: 07/26/03% Solids: 90.9Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4020			P
7440-36-0	Antimony	2.5	B	N	P
7440-38-2	Arsenic	151			P
7440-39-3	Barium	178			P
7440-41-7	Beryllium	0.080	B		P
7440-43-9	Cadmium	0.031	U		P
7440-70-2	Calcium	4400			P
7440-47-3	Chromium	1.4			P
7440-48-4	Cobalt	2.9	B		P
7440-50-8	Copper	13.7			P
7439-89-6	Iron	20400			P
7439-92-1	Lead	21.8			P
7439-95-4	Magnesium	376	B		P
7439-96-5	Manganese	84.3			P
7439-97-6	Mercury	1.3			CV
7440-02-0	Nickel	2.2	B		P
7440-09-7	Potassium	2470			P
7782-49-2	Selenium	2.9		N	P
7440-22-4	Silver	0.19	B		P
7440-23-5	Sodium	348	B		P
7440-28-0	Thallium	2.0			P
7440-62-2	Vanadium	15.4			P
7440-66-6	Zinc	25.7			P
57-12-5	Cyanide	0.54	U		AS

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide	120.0	117.46	97.9	150.0	140.94	94.0	143.67	95.8	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide				150.0	142.40	94.9	142.75	95.2	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide	120.0	129.20	107.7	150.0	148.90	99.3	147.60	98.4	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide				150.0	149.50	99.7	151.17	100.8	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Barium	500.0	479.10	95.8	200.0	200.80	100.4	199.10	99.6	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Barium				200.0	205.30	102.6	204.70	102.4	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Barium				200.0	209.50	104.8	212.10	106.0	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	26000.0	26270.00	101.0	30200.0	30480.00	100.9	30580.00	101.3	P
Antimony	250.0	257.90	103.2	300.0	315.70	105.2	313.50	104.5	P
Arsenic	250.0	252.30	100.9	100.0	102.40	102.4	102.70	102.7	P
Barium	500.0	494.30	98.9	200.0	200.20	100.1	200.00	100.0	P
Beryllium	500.0	504.30	100.9	100.0	99.84	99.8	99.80	99.8	P
Cadmium	500.0	491.80	98.4	100.0	98.33	98.3	97.81	97.8	P
Calcium	25000.0	25220.00	100.9	30200.0	30320.00	100.4	30200.00	100.0	P
Chromium	500.0	498.30	99.7	200.0	198.20	99.1	198.20	99.1	P
Cobalt	500.0	491.60	98.3	200.0	198.50	99.2	198.10	99.0	P
Copper	500.0	503.60	100.7	200.0	203.50	101.8	203.00	101.5	P
Iron	25500.0	26390.00	103.5	30200.0	30630.00	101.4	30730.00	101.8	P
Lead	1000.0	1005.00	100.5	400.0	399.20	99.8	398.90	99.7	P
Magnesium	25000.0	25370.00	101.5	30200.0	30260.00	100.2	30310.00	100.4	P
Manganese	500.0	493.30	98.7	200.0	199.00	99.5	198.80	99.4	P
Nickel	500.0	495.50	99.1	200.0	197.90	99.0	197.70	98.8	P
Potassium	25000.0	26500.00	106.0	30200.0	31590.00	104.6	31850.00	105.5	P
Selenium	250.0	243.80	97.5	100.0	102.90	102.9	101.30	101.3	P
Silver	500.0	497.20	99.4	100.0	99.74	99.7	100.70	100.7	P
Sodium	25000.0	25090.00	100.4	30200.0	29480.00	97.6	29950.00	99.2	P
Thallium	250.0	239.60	95.8	100.0	101.00	101.0	97.83	97.8	P
Vanadium	500.0	495.30	99.1	200.0	199.30	99.6	199.20	99.6	P
Zinc	500.0	501.50	100.3	200.0	202.50	101.2	202.60	101.3	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	30490.00	101.0	30200.00	100.0	P
Antimony				300.0	313.00	104.3	312.90	104.3	P
Arsenic				100.0	104.90	104.9	101.60	101.6	P
Barium				200.0	200.50	100.2	197.40	98.7	P
Beryllium				100.0	100.20	100.2	98.56	98.6	P
Cadmium				100.0	97.47	97.5	96.06	96.1	P
Calcium				30200.0	30480.00	100.9	30000.00	99.3	P
Chromium				200.0	198.10	99.0	195.40	97.7	P
Cobalt				200.0	197.90	99.0	196.60	98.3	P
Copper				200.0	202.60	101.3	200.30	100.2	P
Iron				30200.0	30790.00	102.0	30430.00	100.8	P
Lead				400.0	396.10	99.0	395.10	98.8	P
Magnesium				30200.0	30350.00	100.5	29940.00	99.1	P
Manganese				200.0	199.20	99.6	196.00	98.0	P
Nickel				200.0	197.20	98.6	195.50	97.8	P
Potassium				30200.0	31820.00	105.4	31470.00	104.2	P
Selenium				100.0	100.60	100.6	100.90	100.9	P
Silver				100.0	100.00	100.0	99.30	99.3	P
Sodium				30200.0	29990.00	99.3	29480.00	97.6	P
Thallium				100.0	99.05	99.0	99.70	99.7	P
Vanadium				200.0	198.80	99.4	196.80	98.4	P
Zinc				200.0	202.70	101.4	200.20	100.1	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	26000.0	26540.00	102.1	30200.0	30480.00	100.9	30070.00	99.6	P
Antimony	250.0	257.70	103.1	300.0	308.30	102.8	307.10	102.4	P
Arsenic	250.0	251.60	100.6	100.0	104.10	104.1	101.00	101.0	P
Barium	500.0	496.50	99.3	200.0	199.90	100.0	196.80	98.4	P
Beryllium	500.0	508.90	101.8	100.0	100.70	100.7	99.84	99.8	P
Cadmium	500.0	494.30	98.9	100.0	97.44	97.4	96.19	96.2	P
Calcium	25000.0	25810.00	103.2	30200.0	30700.00	101.7	30340.00	100.5	P
Chromium	500.0	503.10	100.6	200.0	197.90	99.0	194.70	97.4	P
Cobalt	500.0	493.30	98.7	200.0	197.80	98.9	195.90	98.0	P
Copper	500.0	503.50	100.7	200.0	201.40	100.7	198.60	99.3	P
Iron	25500.0	27200.00	106.7	30200.0	31660.00	104.8	31690.00	104.9	P
Lead	1000.0	1028.00	102.8	400.0	401.90	100.5	395.50	98.9	P
Magnesium	25000.0	25800.00	103.2	30200.0	30530.00	101.1	30110.00	99.7	P
Manganese	500.0	497.20	99.4	200.0	198.90	99.4	196.40	98.2	P
Nickel	500.0	501.50	100.3	200.0	198.30	99.2	195.80	97.9	P
Potassium	25000.0	26350.00	105.4	30200.0	31190.00	103.3	30720.00	101.7	P
Selenium	250.0	251.90	100.8	100.0	105.50	105.5	101.70	101.7	P
Silver	500.0	497.80	99.6	100.0	97.51	97.5	96.96	97.0	P
Sodium	25000.0	25380.00	101.5	30200.0	30420.00	100.7	29760.00	98.5	P
Thallium	250.0	249.40	99.8	100.0	102.40	102.4	102.90	102.9	P
Vanadium	500.0	499.70	99.9	200.0	197.10	98.6	193.90	97.0	P
Zinc	500.0	504.10	100.8	200.0	201.60	100.8	200.20	100.1	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	30900.00	102.3	31770.00	105.2	P
Antimony				300.0	318.20	106.1	324.60	108.2	P
Arsenic				100.0	102.90	102.9	105.80	105.8	P
Barium				200.0	202.60	101.3	210.90	105.4	P
Beryllium				100.0	102.20	102.2	104.70	104.7	P
Cadmium				100.0	98.88	98.9	100.70	100.7	P
Calcium				30200.0	31110.00	103.0	31880.00	105.6	P
Chromium				200.0	200.60	100.3	204.30	102.2	P
Cobalt				200.0	197.70	98.8	202.00	101.0	P
Copper				200.0	204.80	102.4	209.50	104.8	P
Iron				30200.0	32720.00	108.3	33640.00	111.4	P
Lead				400.0	403.80	101.0	412.50	103.1	P
Magnesium				30200.0	30830.00	102.1	31520.00	104.4	P
Manganese				200.0	203.90	102.0	210.20	105.1	P
Nickel				200.0	201.40	100.7	205.80	102.9	P
Potassium				30200.0	31390.00	103.9	32130.00	106.4	P
Selenium				100.0	101.40	101.4	105.90	105.9	P
Silver				100.0	99.94	99.9	101.50	101.5	P
Sodium				30200.0	30280.00	100.3	31090.00	102.9	P
Thallium				100.0	105.20	105.2	104.10	104.1	P
Vanadium				200.0	200.20	100.1	204.00	102.0	P
Zinc				200.0	206.40	103.2	210.60	105.3	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	31130.00	103.1			P
Antimony				300.0	315.30	105.1			P
Arsenic				100.0	103.40	103.4			P
Barium				200.0	204.40	102.2			P
Beryllium				100.0	102.50	102.5			P
Cadmium				100.0	98.95	99.0			P
Calcium				30200.0	31290.00	103.6			P
Chromium				200.0	199.80	99.9			P
Cobalt				200.0	197.10	98.6			P
Copper				200.0	205.10	102.6			P
Iron				30200.0	32820.00	108.7			P
Lead				400.0	403.00	100.8			P
Magnesium				30200.0	31000.00	102.6			P
Manganese				200.0	203.00	101.5			P
Nickel				200.0	201.00	100.5			P
Potassium				30200.0	31510.00	104.3			P
Selenium				100.0	102.00	102.0			P
Silver				100.0	99.09	99.1			P
Sodium				30200.0	30320.00	100.4			P
Thallium				100.0	101.80	101.8			P
Vanadium				200.0	199.80	99.9			P
Zinc				200.0	204.70	102.4			P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Manganese	500.0	494.50	98.9	200.0	206.50	103.2	209.00	104.5	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Manganese				200.0	202.30	101.2			P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.72	90.7	5.0	4.85	97.0	4.46	89.2	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	4.76	95.2			CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.73	91.0	5.0	4.93	98.6	4.77	95.4	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.74	91.3	5.0	4.92	98.4	5.04	100.8	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	5.24	104.8	5.30	106.0	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial		Final		
				True	Found %R	Found	%R	
Barium				400.0	390.60 97.6	412.50	103.1	

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum				400.0	448.10	112.0	498.60	124.6
Antimony				120.0	129.20	107.7	130.10	108.4
Arsenic				20.0	22.07	110.4	23.22	116.1
Barium				400.0	396.90	99.2	395.80	99.0
Beryllium				10.0	10.34	103.4	10.44	104.4
Cadmium				10.0	10.35	103.5	10.21	102.1
Calcium				10000.0	10470.00	104.7	10530.00	105.3
Chromium				20.0	21.45	107.2	21.86	109.3
Cobalt				100.0	97.89	97.9	98.37	98.4
Copper				50.0	51.84	103.7	51.42	102.8
Iron				200.0	233.80	116.9	265.50	132.8
Lead				6.0	6.89	114.8	7.38	123.0
Magnesium				10000.0	10340.00	103.4	10390.00	103.9
Manganese				30.0	30.32	101.1	30.36	101.2
Nickel				80.0	80.39	100.5	80.86	101.1
Potassium				10000.0	11030.00	110.3	11020.00	110.2
Selenium				10.0	7.75	77.5	8.13	81.3
Silver				20.0	19.86	99.3	20.31	101.6
Sodium				10000.0	10220.00	102.2	10120.00	101.2
Thallium				20.0	17.74	88.7	21.02	105.1
Vanadium				100.0	100.40	100.4	100.30	100.3
Zinc				40.0	41.43	103.6	41.58	104.0

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP					
	True	Found	%R	Initial			Final		
				True	Found	%R	Found	%R	
Aluminum				400.0	586.70	146.7	689.30	172.3	
Antimony				120.0	130.60	108.8	125.10	104.2	
Arsenic				20.0	21.75	108.8	20.15	100.8	
Barium				400.0	393.40	98.4	392.90	98.2	
Beryllium				10.0	10.30	103.0	10.46	104.6	
Cadmium				10.0	10.52	105.2	10.34	103.4	
Calcium				10000.0	10650.00	106.5	10760.00	107.6	
Chromium				20.0	20.85	104.2	20.71	103.6	
Cobalt				100.0	97.47	97.5	95.09	95.1	
Copper				50.0	50.99	102.0	51.22	102.4	
Iron				200.0	301.80	150.9	359.10	179.6	
Lead				6.0	5.09	84.8	4.58	76.3	
Magnesium				10000.0	10500.00	105.0	10570.00	105.7	
Manganese				30.0	30.33	101.1	30.31	101.0	
Nickel				80.0	80.81	101.0	79.88	99.8	
Potassium				10000.0	10740.00	107.4	10600.00	106.0	
Selenium				10.0	9.98	99.8	9.73	97.3	
Silver				20.0	20.06	100.3	19.21	96.0	
Sodium				10000.0	10520.00	105.2	10360.00	103.6	
Thallium				20.0	21.82	109.1	22.69	113.4	
Vanadium				100.0	99.98	100.0	98.21	98.2	
Zinc				40.0	41.87	104.7	41.98	105.0	

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP					
	True	Found	%R	Initial			Final		
				True	Found	%R	Found	%R	
Manganese				30.0	29.29	97.6	30.87	102.9	

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial		Final		
				True	Found %R	Found	%R	
Mercury	0.2	0.14	70.0					

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury	0.2	0.17	85.0					

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury	0.2	0.26	130.0					

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.495	U	AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Cyanide			10.0	U							AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.467	U	AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Cyanide			10.0	U							AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Barium	7.3	U	7.3	U	7.3	U	7.3	U			P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Barium			7.3	U	7.3	U	7.3	U			P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum	-96.2	B	-85.9	B	-91.8	B	-101.6	B	-9.763	B	P
Antimony	4.7	U	4.7	U	4.7	U	4.7	U	0.470	U	P
Arsenic	4.8	U	4.8	U	4.8	U	4.8	U	0.480	U	P
Barium	5.9	U	5.9	U	5.9	U	5.9	U	0.590	U	P
Beryllium	0.2	B	0.2	U	0.2	U	0.2	U	0.020	U	P
Cadmium	0.6	U	0.6	U	0.6	U	0.6	U	0.060	U	P
Calcium	182.1	U	182.1	U	182.1	U	182.1	U	18.210	U	P
Chromium	1.4	U	1.4	U	1.4	U	1.4	U	0.140	U	P
Cobalt	2.0	U	2.0	U	2.0	U	2.0	U	0.200	U	P
Copper	2.4	U	2.4	U	2.4	U	2.4	U	0.240	U	P
Iron	-48.3	B	-44.0	B	-45.0	B	33.3	U	-5.182	B	P
Lead	1.3	U	1.3	U	1.3	U	1.9	B	0.295	B	P
Magnesium	178.3	U	178.3	U	178.3	U	178.3	U	17.830	U	P
Manganese	0.7	U	0.7	U	0.7	U	0.7	U	0.070	U	P
Nickel	2.1	U	2.1	U	2.1	U	2.1	U	0.210	U	P
Potassium	393.0	U	393.0	U	393.0	U	393.0	U	39.300	U	P
Selenium	3.4	U	3.4	U	3.4	U	3.4	U	0.340	U	P
Silver	2.2	U	2.2	U	2.2	U	2.2	U	0.220	U	P
Sodium	472.7	U	472.7	U	472.7	U	472.7	U	83.900	B	P
Thallium	5.7	U	5.7	U	5.7	U	5.7	U	0.570	U	P
Vanadium	2.0	U	2.0	U	2.0	U	2.0	U	0.200	U	P
Zinc	1.0	U	1.0	U	1.0	U	1.0	U	0.288	B	P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Aluminum			-90.0	B							P
Antimony			4.7	U							P
Arsenic			4.8	U							P
Barium			5.9	U							P
Beryllium			0.2	U							P
Cadmium			0.6	U							P
Calcium			182.1	U							P
Chromium			1.4	U							P
Cobalt			2.0	U							P
Copper			2.4	U							P
Iron			33.3	U							P
Lead			1.3	U							P
Magnesium			178.3	U							P
Manganese			0.7	U							P
Nickel			2.1	U							P
Potassium			393.0	U							P
Selenium			3.4	U							P
Silver			2.2	U							P
Sodium			472.7	U							P
Thallium			5.7	U							P
Vanadium			2.0	U							P
Zinc			1.0	U							P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum	-92.9	B	-112.9	B	-121.6	B	-95.2	B	-9.913	B	P
Antimony	3.8	U	3.8	U	3.8	U	3.8	U	0.968	B	P
Arsenic	2.4	U	3.4	B	2.4	U	2.4	U	0.244	B	P
Barium	7.3	U	7.3	U	7.3	U	7.3	U	0.730	U	P
Beryllium	0.2	U	0.2	U	0.2	U	-0.5	B	-0.074	B	P
Cadmium	0.3	U	0.3	U	0.3	U	0.3	U	0.030	U	P
Calcium	223.2	U	223.2	U	223.2	U	223.2	U	22.320	U	P
Chromium	0.6	B	0.6	U	0.6	U	0.6	U	0.104	B	P
Cobalt	1.8	U	1.8	U	1.8	U	1.8	U	0.180	U	P
Copper	1.4	U	1.4	U	1.4	U	1.4	B	0.173	B	P
Iron	-44.6	B	-38.9	B	-28.8	B	16.8	U	-3.973	B	P
Lead	-2.1	B	1.5	U	1.5	U	1.5	U	0.150	U	P
Magnesium	181.7	U	181.7	U	181.7	U	181.7	U	18.170	U	P
Manganese	0.7	U	0.7	U	0.7	U	0.9	B	0.070	U	P
Nickel	2.0	U	2.0	U	2.0	U	2.0	U	-0.295	B	P
Potassium	250.0	U	250.0	U	250.0	U	250.0	U	25.000	U	P
Selenium	-3.1	B	1.7	U	1.7	U	-1.9	B	0.170	U	P
Silver	0.9	U	-0.9	B	0.9	U	0.9	U	-0.097	B	P
Sodium	392.7	B	372.0	B	313.2	B	451.8	B	74.910	B	P
Thallium	7.0	B	3.6	B	6.7	B	3.2	B	-0.574	B	P
Vanadium	2.2	U	2.2	U	2.2	U	2.2	U	0.220	U	P
Zinc	5.7	U	5.7	U	5.7	U	5.7	U	0.570	U	P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Aluminum			-106.9	B	-106.1	B					P
Antimony			3.8	U	3.8	U					P
Arsenic			2.4	U	2.4	U					P
Barium			7.3	U	7.3	U					P
Beryllium			0.2	U	-0.2	B					P
Cadmium			0.3	U	0.3	U					P
Calcium			223.2	U	223.2	U					P
Chromium			0.6	U	0.6	U					P
Cobalt			1.8	U	1.8	U					P
Copper			1.4	U	1.5	B					P
Iron			16.8	U	-41.3	B					P
Lead			1.5	U	1.5	U					P
Magnesium			181.7	U	181.7	U					P
Manganese			0.9	B	0.7	U					P
Nickel			2.0	U	2.0	U					P
Potassium			250.0	U	250.0	U					P
Selenium			1.7	U	-2.5	B					P
Silver			0.9	U	0.9	U					P
Sodium			470.9	B	273.8	B					P
Thallium			4.8	B	2.8	U					P
Vanadium			2.2	U	2.2	U					P
Zinc			5.7	U	5.7	U					P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Manganese	1.9	U	1.9	U	1.9	U	1.9	U			P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.017	U	CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Mercury	0.1	U	0.1	U	0.1	U					CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.017	U	CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury			0.1	U							CV

USEPA - CLP FORMS

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001ICP ID Number: TJA ICAP 6 ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Barium	0	466	1	507.0	108.8	2	528.7	113.5

USEPA - CLP FORMS

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001ICP ID Number: TJA ICAP 4 ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	477680	509600	513000.0	107.4	513500	514100.0	107.6
Antimony	0	575	-3	630.2	109.6	-1	632.5	110.0
Arsenic	0	97	8	104.0	107.2	5	104.2	107.4
Barium	0	464	2	496.8	107.1	3	496.6	107.0
Beryllium	0	444	0	472.8	106.5	0	475.3	107.0
Cadmium	0	874	-1	925.2	105.9	-1	923.2	105.6
Calcium	500000	476380	491400	499900.0	104.9	493300	501100.0	105.2
Chromium	0	451	4	478.5	106.1	4	480.2	106.5
Cobalt	0	434	-1	456.9	105.3	-1	458.8	105.7
Copper	0	482	4	516.1	107.1	3	515.6	107.0
Iron	200000	192500	204000	202500.0	105.2	205200	203400.0	105.7
Lead	0	41	-1	44.9	109.5	3	45.0	109.8
Magnesium	500000	524140	540200	548000.0	104.6	542100	550100.0	105.0
Manganese	0	451	1	479.0	106.2	2	479.1	106.2
Nickel	0	876	1	926.4	105.8	2	930.4	106.2
Potassium	0	0	-76	-80.5		-86	-85.3	
Selenium	0	41	-7	40.8	99.5	-5	46.2	112.7
Silver	0	198	1	210.5	106.3	0	211.4	106.8
Sodium	0	0	-72	-158.7		-48	-225.8	
Thallium	0	83	-7	84.9	102.3	-3	88.5	106.6
Vanadium	0	464	2	494.5	106.6	2	495.4	106.8
Zinc	0	951	4	999.3	105.1	4	1001.0	105.3

USEPA - CLP FORMS

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001ICP ID Number: TJA ICAP 6ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	488880	542500	512600.0	104.9	516700	531700.0	108.8
Antimony	0	604	11	622.5	103.1	7	642.2	106.3
Arsenic	0	98	2	103.2	105.3	3	101.2	103.3
Barium	0	493	2	488.9	99.2	2	508.5	103.1
Beryllium	0	452	-1	464.8	102.8	0	484.7	107.2
Cadmium	0	922	7	920.0	99.8	7	946.3	102.6
Calcium	500000	459460	494000	470700.0	102.4	477000	487800.0	106.2
Chromium	0	471	5	469.4	99.7	5	483.5	102.7
Cobalt	0	465	9	456.4	98.2	9	465.9	100.2
Copper	0	526	4	514.4	97.8	4	532.2	101.2
Iron	200000	191660	220000	205700.0	107.3	216700	217900.0	113.7
Lead	0	48	7	49.3	102.7	6	55.0	114.6
Magnesium	500000	546140	581600	555500.0	101.7	558200	574200.0	105.1
Manganese	0	468	-1	468.0	100.0	0	486.7	104.0
Nickel	0	926	12	922.4	99.6	12	950.5	102.6
Potassium	0	0	148	-52.9		83	54.9	
Selenium	0	46	3	47.5	103.3	5	54.2	117.8
Silver	0	215	0	207.3	96.4	0	212.4	98.8
Sodium	0	0	188	30.3		-120	-112.8	
Thallium	0	97	16	104.9	108.1	11	108.7	112.1
Vanadium	0	477	-4	473.4	99.2	-4	491.1	103.0
Zinc	0	901	8	929.8	103.2	9	969.4	107.6

USEPA - CLP FORMS

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001ICP ID Number: TJA ICAP 5 ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Manganese	0	473	23	504.6	106.7	26	523.7	110.7

USEPA - CLP FORMS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLBKSSS080.5S

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Matrix (soil/water): SOILLevel (low/med): LOW% Solids for Sample: 100.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		16380.0000		13596.5898		200.00	1391.7		P
Antimony	75 - 125	16.3600		7.9861		50.00	16.7	N	P
Arsenic		110.3000		106.9370		4.00	84.1		P
Barium	75 - 125	616.8000		423.7994		200.00	96.5		P
Beryllium	75 - 125	5.5880		0.6374		5.00	99.0		P
Cadmium	75 - 125	4.5270		0.0320	U	5.00	90.5		P
Chromium	75 - 125	26.7600		6.3095		20.00	102.3		P
Cobalt	75 - 125	58.7700		10.9819		50.00	95.6		P
Copper	75 - 125	53.5600		27.3853		25.00	104.7		P
Iron		31650.0000		32433.3008		100.00	-783.3		P
Lead		17.1100		17.1825		2.00	-3.6		P
Manganese		1463.0000		1410.8860		50.00	104.2		P
Mercury	75 - 125	0.2889		0.1017		0.16	117.0		CV
Nickel	75 - 125	62.5500		11.4728		50.00	102.2		P
Selenium	75 - 125	2.4650		2.0224		1.00	44.3	N	P
Silver	75 - 125	4.1310		0.2057	B	5.00	78.5		P
Thallium	75 - 125	7.7450		3.4792		5.00	85.3		P
Vanadium	75 - 125	80.3300		30.8751		50.00	98.9		P
Zinc	75 - 125	154.0000		102.4440		50.00	103.1		P
Cyanide	75 - 125	5.4858		0.5034	U	4.85	113.1		AS

Comments:

USEPA - CLP FORMS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLBKSSS080.5A

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS SDG No.: IDS001Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum		126600.00	127400.00	2000.0	-40.0		P
Antimony		549.30	74.83	500.0	94.9		P
Arsenic		1017.00	1002.00	40.0	37.5		P
Barium		5659.00	3971.00	2000.0	84.4		P
Beryllium		51.86	5.97	50.0	91.8		P
Cadmium		40.75	0.30 U	50.0	81.5		P
Chromium		243.00	59.12	200.0	91.9		P
Cobalt		542.70	102.90	500.0	88.0		P
Copper		491.00	256.60	250.0	93.8		P
Iron		298700.00	303900.00	1000.0	-520.0		P
Lead		172.30	161.00	20.0	56.5		P
Manganese		18430.00	13220.00	5000.0	104.2		P
Nickel		557.00	107.50	500.0	89.9		P
Selenium		25.37	18.95	10.0	64.2		P
Silver		27.50	1.93 B	50.0	51.1		P
Thallium		75.28	32.60	50.0	85.4		P
Vanadium		748.80	289.30	500.0	91.9		P
Zinc		1409.00	959.90	500.0	89.8		P
Cyanide		28.40	10.00 U	20.0	142.0		AS

Comments: _____

USEPA - CLP FORMS

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DUPLICATES

SAMPLE NO.

IDOLBKSSS080.5D

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Matrix (soil/water): SOIL Level (low/med): LOW% Solids for Sample: 93.7 % Solids for Duplicate: 93.1Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		13596.5898		13874.0703		2.0		P
Antimony	6.4	7.9861		7.5208		6.0		P
Arsenic		106.9370		118.6766		10.4		P
Barium		423.7994		466.0619		9.5		P
Beryllium	0.5	0.6374		0.6605		3.6		P
Cadmium		0.0320	U	0.0320	U			P
Calcium		4010.6731		4224.1201		5.2		P
Chromium		6.3095		6.3084		0.0		P
Cobalt	5.3	10.9819		10.9819		0.0		P
Copper		27.3853		28.4205		3.7		P
Iron		32433.3008		33916.7617		4.5		P
Lead		17.1825		16.0192		7.0		P
Magnesium	533.6	1247.5990		1410.8860		12.3		P
Manganese		1410.8860		1324.4399		6.3		P
Mercury	0.0	0.1017		0.1112		8.9		CV
Nickel	4.3	11.4728		11.8997		3.7		P
Potassium		2875.1340		3043.7571		5.7		P
Selenium	0.5	2.0224		2.0907		3.3		P
Silver		0.2057	B	0.1491	B	31.9		P
Sodium		393.1697	B	396.5849	B	0.9		P
Thallium	1.1	3.4792		3.1057		11.3		P
Vanadium		30.8751		31.8997		3.3		P
Zinc		102.4440		106.4354		3.8		P
Cyanide		0.5034	U	0.5082	U			AS

USEPA - CLP FORMS

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LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits	%R	
Cyanide				6.0	5.9	5.4	6.6	98.3

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899Aqueous LCS Source:

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits	%R	
Cyanide				6.0	5.9	5.4 6.6	98.3	

USEPA - CLP FORMS

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LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits	%R	
Cyanide				6.0	6.47	90.0	110.0	107.9

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits		%R
Aluminum				200.0	205.5	160.0	240.0	102.8
Antimony				50.0	55.3	40.0	60.0	110.6
Arsenic				24.0	25.4	19.2	28.8	105.8
Barium				200.0	208.8	160.0	240.0	104.4
Beryllium				5.0	5.4	4.0	6.0	108.0
Cadmium				25.0	26.1	20.0	30.0	104.4
Calcium				2000.0	2195.0	1600.0	2400.0	109.8
Chromium				20.0	21.7	16.0	24.0	108.5
Cobalt				50.0	52.0	40.0	60.0	104.0
Copper				25.0	27.8	20.0	30.0	111.2
Iron				100.0	110.2	80.0	120.0	110.2
Lead				22.0	23.0	17.6	26.4	104.5
Magnesium				2000.0	2129.0	1600.0	2400.0	106.4
Manganese				50.0	53.3	40.0	60.0	106.6
Nickel				50.0	52.0	40.0	60.0	104.0
Potassium				2000.0	2174.0	1600.0	2400.0	108.7
Selenium				21.0	21.0	16.8	25.2	100.0
Silver				25.0	23.8	20.0	30.0	95.2
Sodium				2000.0	2176.0	1600.0	2400.0	108.8
Thallium				25.0	25.9	20.0	30.0	103.6
Vanadium				50.0	53.7	40.0	60.0	107.4
Zinc				50.0	53.0	40.0	60.0	106.0

USEPA - CLP FORMS

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LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits		%R
Aluminum				200.0	211.2	160.0	240.0	105.6
Antimony				50.0	55.7	40.0	60.0	111.4
Arsenic				24.0	25.7	19.2	28.8	107.1
Barium				200.0	208.5	160.0	240.0	104.2
Beryllium				5.0	5.3	4.0	6.0	106.0
Cadmium				25.0	26.5	20.0	30.0	106.0
Calcium				2000.0	2197.0	1600.0	2400.0	109.8
Chromium				20.0	21.9	16.0	24.0	109.5
Cobalt				50.0	51.7	40.0	60.0	103.4
Copper				25.0	29.9	20.0	30.0	119.6
Iron				100.0	117.8	80.0	120.0	117.8
Lead				22.0	23.8	17.6	26.4	108.2
Magnesium				2000.0	2140.0	1600.0	2400.0	107.0
Manganese				50.0	53.7	40.0	60.0	107.4
Nickel				50.0	52.7	40.0	60.0	105.4
Potassium				2000.0	2418.0	1600.0	2400.0	120.9
Selenium				21.0	21.2	16.8	25.2	101.0
Silver				25.0	26.3	20.0	30.0	105.2
Sodium				2000.0	2164.0	1600.0	2400.0	108.2
Thallium				25.0	26.1	20.0	30.0	104.4
Vanadium				50.0	54.3	40.0	60.0	108.6
Zinc				50.0	56.4	40.0	60.0	112.8

USEPA - CLP FORMS

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LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits	%R	
Mercury				0.1	0.1	0.1	0.1	100.0

USEPA - CLP FORMS

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LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Mercury				0.1	0.1		0.1	0.1 100.0

USEPA - CLP FORMS

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LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits	%R	
Mercury				0.1	0.1	0.1	0.1	100.0

USEPA - CLP FORMS

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LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Solid LCS Source: ERA lot249/USEPA 0996/ERA lot0899

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits	%R	
Mercury				0.1	0.1	0.1	0.1	100.0

USEPA - CLP FORMS

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ICP SERIAL DILUTIONS

SAMPLE NO.

IDOLBKSSS080.5L

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046SAS No.: _____ SDG No.: IDS001Matrix (soil/water): SOILLevel (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ- ence	Q	M
Aluminum	127400.00		131300.00		3.1		P
Antimony	74.83		87.42	B	16.8		P
Arsenic	1002.00		1070.00		6.8		P
Barium	3971.00		4062.00		2.3		P
Beryllium	5.97		6.22	B	4.2		P
Cadmium	0.30	U	1.50	U			P
Calcium	37580.00		39050.00		3.9		P
Chromium	59.12		64.46		9.0		P
Cobalt	102.90		108.30	B	5.2		P
Copper	256.60		261.70		2.0		P
Iron	303900.00		313900.00		3.3		P
Lead	161.00		171.70		6.6		P
Magnesium	11690.00		12020.00	B	2.8		P
Manganese	13220.00		13090.00		1.0		P
Nickel	107.50		115.50	B	7.4		P
Potassium	26940.00		26880.00		0.2		P
Selenium	18.95		22.68	B	19.7		P
Silver	1.93	B	4.50	U	100.0		P
Sodium	3684.00	B	5753.00	B	56.2		P
Thallium	32.60		45.78	B	40.4		P
Vanadium	289.30		294.50		1.8		P
Zinc	959.90		1019.00		6.2		P

USEPA - CLP FORMS

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: _____ Date: 07/01/03

Flame AA ID Number: Lachat Cyanide

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Cyanide			10	10.0	AS

Comments: _____

USEPA - CLP FORMS

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001ICP ID Number: _____ Date: 07/01/03Flame AA ID Number: Leeman Hydra AA

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Mercury	253.70		0.2	0.10	CV

Comments: _____

USEPA - CLP FORMS

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046

SAS No.: _____

SDG No.: IDS001ICP ID Number: TJA ICAP 4Date: 07/01/03

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.215		200	23.6	P
Antimony	206.838		60	4.7	P
Arsenic	189.042		10	4.8	P
Barium	493.409		200	5.9	P
Beryllium	313.042		5	0.2	P
Cadmium	226.502		5	0.6	P
Calcium	317.933		5000	182.1	P
Chromium	267.716		10	1.4	P
Cobalt	228.616		50	2.0	P
Copper	324.754		25	2.4	P
Iron	271.441		100	33.3	P
Lead	220.353		3	1.3	P
Magnesium	279.078		5000	178.3	P
Manganese	257.610		15	0.7	P
Nickel	231.604		40	2.1	P
Potassium	766.491		5000	393.0	P
Selenium	196.026		5	3.4	P
Silver	328.068		10	2.2	P
Sodium	330.232		5000	472.7	P
Thallium	190.864		10	5.7	P
Vanadium	292.402		50	2.0	P
Zinc	213.856		20	1.0	P

Comments: _____

USEPA - CLP FORMS

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001ICP ID Number: TJA ICAP 5 Date: 07/01/03

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Manganese	294.920		15	1.9	P

Comments: _____

USEPA - CLP FORMS

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046

SAS No.: _____

SDG No.: IDS001ICP ID Number: TJA ICAP 6Date: 07/01/03

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.215		200	18.3	P
Antimony	206.838		60	3.8	P
Arsenic	189.042		10	2.4	P
Barium	493.409		200	7.3	P
Beryllium	313.042		5	0.2	P
Cadmium	226.502		5	0.3	P
Calcium	317.933		5000	223.2	P
Chromium	267.716		10	0.6	P
Cobalt	228.616		50	1.8	P
Copper	324.754		25	1.4	P
Iron	271.441		100	16.8	P
Lead	220.353		3	1.5	P
Magnesium	279.079		5000	181.7	P
Manganese	257.610		15	0.7	P
Nickel	231.604		40	2.0	P
Potassium	766.491		5000	250.0	P
Selenium	196.026		5	1.7	P
Silver	328.068		10	0.9	P
Sodium	330.232		5000	218.8	P
Thallium	190.864		10	2.8	P
Vanadium	292.402		50	2.2	P
Zinc	206.200		20	5.7	P

Comments: _____

USEPA - CLP FORMS

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ba
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	-0.0000600	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0008950	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000330	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0004320
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0006300	0.0000000	0.0000090	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000200	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	-0.0000220	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0000200	0.0000000	-0.0000900	0.0000000	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000490	0.0000000	0.0000000
Zinc	213.86	0.0000250	0.0000000	0.0000630	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	Mn	Mo
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0072400
Antimony	206.84	0.0000000	0.0111600	0.0000000	0.0000000	-0.0024800
Arsenic	189.04	0.0000000	0.0004700	0.0000000	0.0000000	0.0013380
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0001150	0.0000000	0.0000000	0.0000000	0.0001350
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	-0.0016380
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.1059800	0.0000000	0.0000000	0.0000000	0.0036200
Lead	220.35	-0.0022600	-0.0001190	0.0000000	0.0000000	-0.0007540
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0004300	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	-0.0038600	0.0000000	0.0000000	-0.0042750
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	-0.0007920
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0032700	0.0002540	0.0000000	-0.008140	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	-0.0160000
Zinc	213.86	0.0000000	0.0000000	0.0003300	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Ni	Sb	Sn	V	Zn
Aluminum	308.22	0.0000000	0.0000000	0.1440400	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0006280	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	-0.000192	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0237000	0.0000000
Lead	220.35	0.0001240	-0.0002280	0.0000000	0.0005020	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0001660	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	-0.1212200	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.1177000
Thallium	190.86	0.0000000	0.0000000	0.0000000	0.0025400	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.86	0.0052400	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001ICP ID Number: TJA ICAP 5 Date: 10/02/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ag
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000070	0.0000000	0.0000830	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000290	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000060	0.0000000	0.0000000
Iron	271.44	0.0001300	0.0000000	0.0000000	-0.000400	0.0000000
Lead	220.35	0.0008600	0.0000000	0.0000920	-0.000008	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	294.92	0.0000000	0.0000000	0.0006580	0.0000180	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000260	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	178.29	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000100	0.0000000	-0.0001300	-0.000010	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.55	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	-0.0000090	0.0000000	-0.0004350	0.0000000	0.0000000
Titanium	334.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	-0.0003250	0.0000000	0.0000000
Zinc	213.85	0.0000000	0.0000000	0.0000800	0.0000390	0.0000000

Comments: _____

USEPA - CLP FORMS

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 5 Date: 10/02/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	B	Be	Cd	Co
Aluminum	308.22	0.0026340	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0002400	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000840
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000610
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0840960
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	-0.0026440
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	294.92	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0022990
Phosphorus	178.29	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.55	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0000000	0.0000000	0.0000000	0.0000000	0.0018110
Titanium	334.94	0.0000000	0.0000000	0.0000000	0.0000000	-0.0002200
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.85	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 5 Date: 10/02/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Cr	Cu	Mn	Na	Ni
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0087280	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	-0.0088830	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0001070
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	-0.0000530	-0.0000340	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	294.92	-0.0015990	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0004700	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	178.29	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	-0.0000990	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.55	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0002810	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.94	0.0002200	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	-0.0020840	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.85	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 5 Date: 10/02/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Pb	Sb	Se	Si	Tl
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0000000	-0.0001650	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	294.92	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0005120
Phosphorus	178.29	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000650
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.55	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.85	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 5 Date: 10/02/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		V	Zn			
Aluminum	308.22	-0.0084630	0.0000000			
Antimony	206.84	-0.0060220	0.0000000			
Arsenic	189.04	0.0000000	0.0000000			
Barium	493.41	0.0000000	0.0000000			
Beryllium	313.04	0.0009440	0.0000000			
Cadmium	226.50	0.0000000	0.0000000			
Calcium	317.93	0.0000000	0.0000000			
Chromium	267.72	-0.0001950	0.0000000			
Cobalt	228.61	0.0000000	0.0000000			
Copper	324.75	0.0000000	0.0000000			
Iron	271.44	0.0124990	0.0000000			
Lead	220.35	0.0000000	0.0000000			
Magnesium	279.08	0.0000000	0.0000000			
Manganese	294.92	0.0078880	0.0000000			
Molybdenum	202.03	-0.0000010	0.0000000			
Nickel	231.60	0.0000000	0.0000000			
Phosphorus	178.29	0.0000000	0.0000000			
Potassium	766.49	0.0000000	0.0000000			
Selenium	196.03	0.0000920	0.0000000			
Silver	328.07	0.0000910	0.0000000			
Sodium	330.23	0.0000000	0.0593250			
Strontium	421.55	0.0000000	0.0000000			
Thallium	190.86	-0.0011100	0.0000000			
Titanium	334.94	0.0000000	0.0000000			
Vanadium	292.40	0.0000000	0.0000000			
Zinc	213.85	-0.0000350	0.0000000			

Comments: _____

USEPA - CLP FORMS

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 6 Date: 10/01/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ag
Aluminum	308.215	0.0000000	0.0000000	-0.0002180	0.0000000	0.0000000
Antimony	206.838	0.0000080	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000170	0.0000000	-0.0000590	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0000740	0.0000000	0.0000000
Cadmium	226.502	0.0000010	0.0000000	0.0000590	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000100	0.0000000	-0.0000200	0.0000060	0.0000000
Cobalt	228.616	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.441	0.0001740	0.0000000	0.0000000	-0.001587	0.0000000
Lead	220.353	-0.0000300	0.0000000	0.0000550	-0.000006	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000200	0.0000000
Molybdenum	202.030	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000520	0.0000000	0.0000000
Phosphorus	178.287	0.0000070	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	-0.0007500	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.232	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000240	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000080	0.0000000	-0.0001100	0.0000000	0.0000000
Tin	189.989	0.0000090	0.0000000	-0.0000750	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000140	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000030	0.0000040	0.0000000
Zinc	206.200	0.0000300	0.0000000	-0.0000600	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 6 Date: 10/01/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	B	Be	Cd	Co
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.441	0.0000000	0.0000000	0.0000000	0.0000000	-0.0082960
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.030	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	178.287	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001900
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.232	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	0.0000000	0.0000000	0.0002350
Tin	189.989	0.0000000	0.0000000	-0.0004370	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.200	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 6 Date: 10/01/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Cr	Cu	Mn	Na	Ni
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0078510	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002840	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001750
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.441	0.0008900	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000800
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.030	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	178.287	-0.0007400	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.232	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0004500	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.200	0.0044570	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001ICP ID Number: TJA ICAP 6 Date: 10/01/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Pb	Sb	Se	Si	Tl
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.441	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.030	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	178.287	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.232	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	-0.0003500	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.200	0.0003900	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001

ICP ID Number: TJA ICAP 6 Date: 10/01/02

Analyte	Wave-length (nm)	Interelement Correction Factors for:			
		V	Zn		
Aluminum	308.215	0.0173200	0.0000000		
Antimony	206.838	-0.0012700	0.0000000		
Arsenic	189.042	-0.0002800	0.0000000		
Barium	493.409	0.0000000	0.0000000		
Beryllium	313.042	0.0004800	0.0000000		
Boron	249.678	0.0000000	0.0000000		
Cadmium	226.502	0.0000000	0.0000000		
Calcium	317.933	0.0000000	0.0000000		
Chromium	267.716	-0.0003600	0.0000000		
Cobalt	228.616	0.0000000	0.0000000		
Copper	324.754	0.0000000	0.0000000		
Iron	271.441	0.0081200	0.0000000		
Lead	220.353	-0.0000850	0.0000000		
Magnesium	279.079	0.0000000	0.0000000		
Manganese	257.610	0.0000000	0.0000000		
Molybdenum	202.030	0.0000000	0.0000000		
Nickel	231.604	0.0000000	0.0000000		
Phosphorus	178.287	0.0000000	0.0164830		
Potassium	766.491	0.0000000	0.0000000		
Selenium	196.026	0.0000000	0.0000000		
Silver	328.068	-0.0003350	0.0000000		
Sodium	330.232	-0.1479730	0.6581000		
Strontium	421.552	0.0000000	0.0000000		
Thallium	190.864	0.0014900	0.0000000		
Tin	189.989	0.0000000	0.0000000		
Titanium	334.941	0.0000000	0.0000000		
Vanadium	292.402	0.0000000	0.0000000		
Zinc	206.200	-0.0004730	0.0000000		

Comments: _____

USEPA - CLP FORMS

12

ICP LINEAR RANGES (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001ICP ID Number: TJA ICAP 4Date: 07/01/03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	10.00	1000000.0	P
Antimony	10.00	100000.0	P
Arsenic	10.00	5000.0	P
Barium	10.00	10000.0	P
Beryllium	10.00	5000.0	P
Cadmium	10.00	5000.0	P
Calcium	10.00	600000.0	P
Chromium	10.00	100000.0	P
Cobalt	10.00	100000.0	P
Copper	10.00	10000.0	P
Iron	10.00	1000000.0	P
Lead	10.00	10000.0	P
Magnesium	10.00	500000.0	P
Manganese	10.00	10000.0	P
Nickel	10.00	10000.0	P
Potassium	10.00	100000.0	P
Selenium	10.00	5000.0	P
Silver	10.00	2000.0	P
Sodium	10.00	100000.0	P
Thallium	10.00	5000.0	P
Vanadium	10.00	100000.0	P
Zinc	10.00	5000.0	P

Comments: _____

USEPA - CLP FORMS

12

ICP LINEAR RANGES (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001ICP ID Number: TJA ICAP 5 Date: 07/01/03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Manganese	10.00	100000.0	P

Comments: _____

USEPA - CLP FORMS

12

ICP LINEAR RANGES (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001ICP ID Number: TJA ICAP 6Date: 07/01/03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	10.00	1000000.0	P
Antimony	10.00	100000.0	P
Arsenic	10.00	5000.0	P
Barium	10.00	10000.0	P
Beryllium	10.00	5000.0	P
Cadmium	10.00	5000.0	P
Calcium	10.00	600000.0	P
Chromium	10.00	100000.0	P
Cobalt	10.00	100000.0	P
Copper	10.00	100000.0	P
Iron	10.00	1000000.0	P
Lead	10.00	50000.0	P
Magnesium	10.00	600000.0	P
Manganese	10.00	10000.0	P
Nickel	10.00	50000.0	P
Potassium	10.00	100000.0	P
Selenium	10.00	5000.0	P
Silver	10.00	2000.0	P
Sodium	10.00	100000.0	P
Thallium	10.00	5000.0	P
Vanadium	10.00	100000.0	P
Zinc	10.00	10000.0	P

Comments: _____

USEPA - CLP FORMS

13

PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Method: AS

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
ICV	08/01/03	50.0	50.0
IDOLWPSSS030.5	08/01/03	1.00	50.0
IDOLWPSSS210.5	08/01/03	1.06	50.0
IDOLWPSUS023.5	08/01/03	1.26	50.0
LCS0801B	08/01/03	1.00	50.0
LCSD0801B	08/01/03	1.00	50.0
PBS0801B	08/01/03	1.01	50.0

USEPA - CLP FORMS

13

PREPARATION LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Method: AS

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
ICV	08/02/03	50.0	50.0
IDOLBKSSS080.5	08/02/03	1.06	50.0
IDOLBKSSS080.5D	08/02/03	1.05	50.0
IDOLBKSSS080.5S	08/02/03	1.03	50.0
IDOLTASSS100.5	08/02/03	1.14	50.0
IDOLTASSS110.5	08/02/03	1.05	50.0
IDOLTASSS190.3	08/02/03	1.02	50.0
IDOLTASSS200.5	08/02/03	1.01	50.0
IDOLTASSS230.5	08/02/03	1.03	50.0
IDOLTASUS201.0	08/02/03	1.08	50.0
IDOLWPSSS010.5	08/02/03	1.03	50.0
IDOLWPSSS020.5	08/02/03	1.02	50.0
IDOLWPSSS090.5	08/02/03	1.09	50.0
IDOLWPSSS170.5	08/02/03	1.05	50.0
IDOLWPSUS033.5	08/02/03	1.00	50.0
IDOLWPSUS041.0	08/02/03	1.07	50.0
IDOLWPSUS18100	08/02/03	1.07	50.0
IDOLWPSUS185.5	08/02/03	1.02	50.0
LCSD0802B	08/02/03	1.00	50.0
PBS0802B	08/02/03	1.07	50.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Method: CV

EPA Sample No.	Preparation Date	Initial Weight (α)	Volume (mL)
IDOLTASSS230.5	08/13/03	0.66	100.0
IDOLWPSSS020.5	08/13/03	0.62	100.0
IDOLWPSSS030.5	08/13/03	0.63	100.0
IDOLWPSSS210.5	08/13/03	0.63	100.0
IDOLWPSUS023.5	08/13/03	0.63	100.0
LCSDS0813A	08/13/03	1.00	100.0
LCSS0813A	08/13/03	1.00	100.0
PBS0813A	08/13/03	0.60	100.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Method: CV

EPA Sample No.	Preparation Date	Initial Weight (σ)	Volume (mL)
IDOLBKSSS080.5	08/14/03	0.62	100.0
IDOLBKSSS080.5D	08/14/03	0.64	100.0
IDOLBKSSS080.5S	08/14/03	0.63	100.0
IDOLTASSS100.5	08/14/03	0.62	100.0
IDOLTASSS110.5	08/14/03	0.63	100.0
IDOLTASSS190.3	08/14/03	0.65	100.0
IDOLTASSS200.5	08/14/03	0.62	100.0
IDOLTASUS201.0	08/14/03	0.66	100.0
IDOLWPSSS010.5	08/14/03	0.61	100.0
IDOLWPSSS090.5	08/14/03	0.61	100.0
IDOLWPSSS170.5	08/14/03	0.64	100.0
IDOLWPSUS033.5	08/14/03	0.67	100.0
IDOLWPSUS041.0	08/14/03	0.63	100.0
IDOLWPSUS18100	08/14/03	0.61	100.0
IDOLWPSUS185.5	08/14/03	0.64	100.0
LCSS0814E	08/14/03	1.00	100.0
LCSSD0814E	08/14/03	1.00	100.0
PBS0814E	08/14/03	0.60	100.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Method: P

EPA Sample No.	Preparation Date	Initial Weight (g)	Volume (mL)
IDOLTASSS230.5	08/20/03	1.15	100.0
IDOLWPSSS020.5	08/20/03	1.06	100.0
IDOLWPSSS030.5	08/20/03	1.04	100.0
IDOLWPSSS210.5	08/20/03	1.10	100.0
IDOLWPSUS023.5	08/20/03	1.06	100.0
LCSS0820D	08/20/03	1.00	100.0
PBS0820D	08/20/03	1.00	100.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001Method: P

EPA Sample No.	Preparation Date	Initial Weight (α)	Volume (mL)
IDOLBKSSS080.5	08/22/03	1.00	100.0
IDOLBKSSS080.5D	08/22/03	1.00	100.0
IDOLBKSSS080.5S	08/22/03	1.00	100.0
IDOLTASSS100.5	08/22/03	1.01	100.0
IDOLTASSS110.5	08/22/03	1.08	100.0
IDOLTASSS190.3	08/22/03	1.02	100.0
IDOLTASSS200.5	08/22/03	1.07	100.0
IDOLTASUS201.0	08/22/03	1.03	100.0
IDOLWPSSS010.5	08/22/03	1.04	100.0
IDOLWPSSS090.5	08/22/03	1.12	100.0
IDOLWPSSS170.5	08/22/03	1.08	100.0
IDOLWPSUS033.5	08/22/03	1.16	100.0
IDOLWPSUS041.0	08/22/03	1.13	100.0
IDOLWPSUS18100	08/22/03	1.01	100.0
IDOLWPSUS185.5	08/22/03	1.06	100.0
LCSS0822E	08/22/03	1.00	100.0
PBS0822E	08/22/03	1.00	100.0

USEPA - CLP FORMS

14

ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: Lachat Cyanide QC8000Method: ASStart Date: 08/01/03End Date: 08/01/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K I	S E	A G	N A	T L	V L	Z N	C N
S0	1.00	1707																									X
S10	1.00	1708																									X
S30	1.00	1709																									X
S50	1.00	1710																									X
S100	1.00	1711																									X
S200	1.00	1712																									X
S300	1.00	1713																									X
ICV	1.00	1715																									X
ICB	1.00	1716																									X
LRS	1.00	1717																									X
LRS	1.00	1718																									X
CCV	1.00	1719																									X
CCB	1.00	1720																									X
ZZZZZZ	1.00	1721																									
PBS0801B	1.00	1722																									X
LCS0801B	1.00	1723																									X
LCSD0801B	1.00	1724																									X
ZZZZZZ	1.00	1724																									
ZZZZZZ	1.00	1725																									
ZZZZZZ	1.00	1726																									
ZZZZZZ	1.00	1727																									
ZZZZZZ	1.00	1728																									
ZZZZZZ	1.00	1729																									
CCV	1.00	1730																									X
CCB	1.00	1731																									X
ZZZZZZ	1.00	1732																									
ZZZZZZ	1.00	1733																									
ZZZZZZ	1.00	1734																									
ZZZZZZ	1.00	1735																									
ZZZZZZ	1.00	1736																									
ZZZZZZ	1.00	1737																									
ZZZZZZ	1.00	1738																									
ZZZZZZ	1.00	1739																									
ZZZZZZ	1.00	1740																									
ZZZZZZ	1.00	1741																									
CCV	1.00	1742																									X
CCB	1.00	1743																									X
ZZZZZZ	1.00	1744																									

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: Lachat Cyanide QC8000Method: ASStart Date: 08/01/03End Date: 08/01/03

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V	Z N	C N				
IDOLWPSUS023.5	1.00	1745																									X				
IDOLWPSSS210.5	1.00	1746																									X				
IDOLWPSSS030.5	1.00	1747																									X				
CCV	1.00	1748																									X				
CCB	1.00	1749																									X				

USEPA - CLP FORMS

14

ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: Lachat Cyanide QC8000Method: ASStart Date: 08/02/03End Date: 08/02/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K I	S E	A G	N A	T L	V	Z N	C N
S0	1.00	1256																									X
S10	1.00	1257																									X
S30	1.00	1258																									X
S50	1.00	1259																									X
S100	1.00	1300																									X
S200	1.00	1301																									X
S300	1.00	1302																									X
ICV	1.00	1304																									X
ICB	1.00	1305																									X
LRS	1.00	1306																									X
LRS	1.00	1307																									X
CCV	1.00	1308																									X
CCB	1.00	1309																									X
PBS0802B	1.00	1310																									X
ZZZZZZ	1.00	1311																									
LCSD0802B	1.00	1312																									X
IDOLWPSSS020.5	1.00	1313																									X
IDOLTASSS230.5	1.00	1314																									X
IDOLWPSSS090.5	1.00	1315																									X
IDOLWPSUS033.5	1.00	1316																									X
IDOLWPSUS041.0	1.00	1317																									X
IDOLTASSS110.5	1.00	1317																									X
IDOLWPSSS010.5	1.00	1318																									X
CCV	1.00	1319																									X
CCB	1.00	1320																									X
IDOLTASSS100.5	1.00	1321																									X
IDOLWPSSS170.5	1.00	1322																									X
IDOLWPSUS185.5	1.00	1323																									X
IDOLBKSSS080.5	1.00	1324																									X
IDOLBKSSS080.5D	1.00	1325																									X
IDOLBKSSS080.5S	1.00	1326																									X
IDOLWPSUS18100	1.00	1327																									X
IDOLTASSS190.3	1.00	1328																									X
IDOLTASSS200.5	1.00	1329																									X
IDOLTASUS201.0	1.00	1330																									X
CCV	1.00	1331																									X
CCB	1.00	1332																									X
ZZZZZZ	1.00	1333																									

USEPA - CLP FORMS

14

ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: Lachat Cyanide QC8000Method: ASStart Date: 08/02/03End Date: 08/02/03

EPA Sample No.	D/F	Time	% R	Analytes																						
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N
ZZZZZZ	1.00	1334																								
ZZZZZZ	1.00	1335																								
ZZZZZZ	1.00	1336																								
IDOLBKSSS080.5A	1.00	1337																								X
CCV	1.00	1338																								X
CCB	1.00	1339																								X

USEPA - CLP FORMS

14

ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: TJA ICAP 6Method: PStart Date: 09/06/03End Date: 09/06/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N
S0	1.00	1813					X																		
S	1.00	1817																							
S	1.00	1821																							
S	1.00	1824					X																		
LRS	1.00	1829					X																		
LRS	1.00	1833					X																		
LRS	1.00	1837					X																		
ICV	1.00	1841					X																		
ICB	1.00	1846					X																		
ICSA	1.00	1850					X																		
ICSAB	1.00	1854					X																		
CRI	1.00	1858					X																		
CCV	1.00	1902					X																		
CCB	1.00	1906					X																		
ZZZZZZ	1.00	1910																							
ZZZZZZ	1.00	1915																							
ZZZZZZ	1.00	1919																							
ZZZZZZ	1.00	1923																							
ZZZZZZ	1.00	1927																							
ZZZZZZ	5.00	1931																							
ZZZZZZ	1.00	1935																							
ZZZZZZ	1.00	1939																							
ZZZZZZ	1.00	1943																							
ZZZZZZ	1.00	1947																							
CCV	1.00	1951					X																		
CCB	1.00	1955					X																		
ZZZZZZ	1.00	1959																							
ZZZZZZ	5.00	2003																							
ZZZZZZ	1.00	2007																							
ZZZZZZ	1.00	2011																							
ZZZZZZ	1.00	2015																							
ZZZZZZ	1.00	2020																							
ZZZZZZ	1.00	2024																							
ZZZZZZ	1.00	2028																							
ZZZZZZ	1.00	2032																							
ZZZZZZ	1.00	2036																							
CCV	1.00	2040					X																		
CCB	1.00	2044					X																		

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: TJA ICAP 6Method: PStart Date: 09/06/03End Date: 09/06/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N
ZZZZZZ	1.00	2048																							
ZZZZZZ	1.00	2052																							
ZZZZZZ	1.00	2056																							
ZZZZZZ	1.00	2100																							
ZZZZZZ	1.00	2104																							
ZZZZZZ	1.00	2108																							
ZZZZZZ	1.00	2112																							
ZZZZZZ	1.00	2116																							
ZZZZZZ	1.00	2121																							
ZZZZZZ	1.00	2125																							
CCV	1.00	2129					X																		
CCB	1.00	2133					X																		
ZZZZZZ	1.00	2137																							
ZZZZZZ	5.00	2141																							
ZZZZZZ	1.00	2145																							
ZZZZZZ	1.00	2149																							
ZZZZZZ	1.00	2153																							
ZZZZZZ	1.00	2157																							
ZZZZZZ	1.00	2201																							
ZZZZZZ	1.00	2205																							
IDOLTASUS201.0	1.00	2209					X																		
CCV	1.00	2213					X																		
CCB	1.00	2218					X																		
ICSA	1.00	2222					X																		
ICSAB	1.00	2226					X																		
CRI	1.00	2230					X																		
CCV	1.00	2234					X																		
CCB	1.00	2238					X																		

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: TJA ICAP 4Method: PStart Date: 09/18/03End Date: 09/18/03

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A G	N A	T L	V Z	Z N	C N				
S0	1.00	1304		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
S	1.00	1309		X						X				X		X			X			X									
S	1.00	1313			X	X								X					X			X									
S	1.00	1316					X	X	X		X	X	X			X		X			X			X	X						
LRS	1.00	1321		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
LRS	1.00	1326		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
LRS	1.00	1331		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ICV	1.00	1335		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ICB	1.00	1340		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ICSA	1.00	1345		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ICSAB	1.00	1350		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CRI	1.00	1354		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCV	1.00	1359		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB	1.00	1404		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ	1.00	1408																													
ZZZZZZ	1.00	1413																													
ZZZZZZ	1.00	1418																													
ZZZZZZ	1.00	1423																													
ZZZZZZ	1.00	1428																													
ZZZZZZ	1.00	1433																													
ZZZZZZ	5.00	1437																													
ZZZZZZ	1.00	1442																													
ZZZZZZ	1.00	1446																													
ZZZZZZ	1.00	1451																													
CCV	1.00	1456		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB	1.00	1501		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ	1.00	1505																													
ZZZZZZ	1.00	1510																													
ZZZZZZ	1.00	1515																													
PBS0820D	1.00	1520		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
LCSS0820D	1.00	1525		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
IDOLWPSUS023.5	10.00	1529														X									X						
IDOLWPSUS023.5	1.00	1534		X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X							
IDOLWPSSS210.5	10.00	1539				X										X															
IDOLWPSSS210.5	1.00	1543		X	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X					
IDOLWPSSS030.5	1.00	1548		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X					
CCV	1.00	1553		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X					
CCB	1.00	1557		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X					

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: TJA ICAP 4Method: PStart Date: 09/18/03End Date: 09/18/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A G	N A	T L	V	Z N	C N
IDOLWPSSS020.5	10.00	1602					X								X												
IDOLWPSSS020.5	1.00	1607		X	X	X		X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X
IDOLTASSS230.5	1.00	1611		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
ICSA	1.00	1616		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
ICSAB	1.00	1621		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
CRI	1.00	1625		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
CCV	1.00	1630		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
CCB	1.00	1635		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: TJA ICAP 6Method: PStart Date: 09/18/03End Date: 09/18/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A G	N A	T L	V N
S0	1.00	1348		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S	1.00	1352		X						X				X	X					X			X		
S	1.00	1355			X	X									X						X			X	
S	1.00	1359					X	X	X		X	X	X				X	X			X			X	X
LRS	1.00	1404		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LRS	1.00	1408		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LRS	1.00	1412		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICV	1.00	1416		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICB	1.00	1420		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSA	1.00	1424		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSAB	1.00	1429		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRI	1.00	1433		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV	1.00	1437		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB	1.00	1441		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PBS0822E	1.00	1445		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LCSS0822E	1.00	1449		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	10.00	1453																							
IDOLWPSS090.5	1.00	1457		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	10.00	1501																							
IDOLWPSUS033.5	1.00	1505		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLWPSUS041.0	1.00	1509		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLTASSS110.5	1.00	1513		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1.00	1518																							
ZZZZZZ	100.00	1522																							
CCV	1.00	1526		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB	1.00	1530		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLWPSS010.5	10.00	1534				X	X								X								X	X	X
IDOLWPSS010.5	1.00	1538		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	
ZZZZZZ	1.00	1542																							
ZZZZZZ	1.00	1546																							
IDOLTASSS100.5	1.00	1550		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLWPSSS170.5	1.00	1554		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLWPSUS185.5	1.00	1558		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLBKSSS080.5	1.00	1602		X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X
IDOLBKSSS080.5L	5.00	1606		X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X
IDOLBKSSS080.5A	1.00	1610		X	X	X	X	X	X		X	X	X	X	X					X	X	X		X	X
CCV	1.00	1614		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB	1.00	1619		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: TJA ICAP 6Method: PStart Date: 09/18/03End Date: 09/18/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A G	N A	T L	V	Z N	C N
IDOLBKSSS080.5D	1.00	1623		X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	
IDOLBKSSS080.5S	1.00	1627		X	X	X	X	X	X		X	X	X	X	X			X		X	X		X	X	X		
IDOLWPSUS18100	1.00	1631		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
IDOLTASSS190.3	1.00	1635		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
IDOLTASSS200.5	10.00	1639															X										
IDOLTASSS200.5	1.00	1643		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
IDOLTASUS201.0	1.00	1647		X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
CCV	1.00	1651		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
CCB	1.00	1655		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
ICSA	1.00	1659		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
ICSAB	1.00	1704		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
CRI	1.00	1708		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
CCV	1.00	1712		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
CCB	1.00	1716		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: TJA ICAP 5Method: PStart Date: 09/18/03End Date: 09/19/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V	Z N	C N
S0	1.00	2228														X											
S	1.00	2234																									
S	1.00	2238																									
S	1.00	2242														X											
LRS	1.00	2249														X											
LRS	1.00	2254														X											
LRS	1.00	2300														X											
ICV	1.00	2306														X											
ICB	1.00	2312														X											
ICSA	1.00	2318														X											
ICSAB	1.00	2324														X											
CRI	1.00	2330														X											
CCV	1.00	2336														X											
CCB	1.00	2341														X											
ZZZZZZ	100.00	2347																									
ZZZZZZ	100.00	2353																									
ZZZZZZ	10.00	2359																									
ZZZZZZ	10.00	0005																									
ZZZZZZ	10.00	0010																									
IDOLBKSSS080.5	10.00	0016														X											
IDOLBKSSS080.5L	50.00	0022														X											
IDOLBKSSS080.5A	10.00	0028														X											
IDOLBKSSS080.5D	10.00	0033														X											
IDOLBKSSS080.5S	10.00	0039														X											
CCV	1.00	0045														X											
CCB	1.00	0051														X											
ZZZZZZ	1.00	0057																									
ZZZZZZ	1.00	0102																									
ZZZZZZ	1.00	0108																									
ZZZZZZ	1.00	0114																									
ZZZZZZ	1.00	0120																									
ZZZZZZ	1.00	0125																									
ZZZZZZ	1.00	0131																									
ICSA	1.00	0137														X											
ICSAB	1.00	0143														X											
CRI	1.00	0149														X											
CCV	1.00	0154														X											
CCB	1.00	0200														X											

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/14/03End Date: 08/14/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A G	A L	T V	Z N
S0	1.00	1447																X							
S0.2	1.00	1449																X							
S0.5	1.00	1451																X							
S1	1.00	1453																X							
S5	1.00	1454																X							
S10	1.00	1456																X							
ICV	1.00	1458																X							
ICB	1.00	1500																X							
CRA	1.00	1501																X							
CCV	1.00	1503																X							
CCB	1.00	1505																X							
PBS0813A	1.00	1507																X							
LCSS0813A	1.00	1508																X							
LCSDS0813A	1.00	1510																X							
ZZZZZZ	1.00	1512																							
ZZZZZZ	1.00	1514																							
ZZZZZZ	1.00	1516																							
ZZZZZZ	1.00	1518																							
ZZZZZZ	1.00	1519																							
ZZZZZZ	1.00	1521																							
CCV	1.00	1523																X							
CCB	1.00	1525																X							
ZZZZZZ	1.00	1527																							
ZZZZZZ	1.00	1528																							
ZZZZZZ	1.00	1530																							
ZZZZZZ	1.00	1532																							
ZZZZZZ	1.00	1534																							
ZZZZZZ	1.00	1535																							
ZZZZZZ	1.00	1537																							
ZZZZZZ	1.00	1539																							
IDOLWPSUS023.5	1.00	1541																X							
CCV	1.00	1543																X							
CCB	1.00	1545																X							

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/14/03End Date: 08/14/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S E	A G	N A	T L	V N
S0	1.00	1654																X							
S0.2	1.00	1656																X							
S0.5	1.00	1658																X							
S1	1.00	1700																X							
S5	1.00	1701																X							
S10	1.00	1703																X							
ICV	1.00	1705																X							
ICB	1.00	1707																X							
CRA	1.00	1709																X							
CCV	1.00	1710																X							
CCB	1.00	1712																X							
IDOLWPSSS210.5	2.00	1714																X							
IDOLWPSSS030.5	1.00	1716																X							
IDOLWPSSS020.5	5.00	1718																X							
IDOLTASSS230.5	1.00	1719																X							
ZZZZZZ	1.00	1721																							
ZZZZZZ	1.00	1723																							
ZZZZZZ	1.00	1725																							
ZZZZZZ	1.00	1727																							
ZZZZZZ	1.00	1728																							
CCV	1.00	1730																X							
CCB	1.00	1732																X							

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/14/03End Date: 08/15/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A L	N T	V Z	C N
S0	1.00	2326																X							
S0.2	1.00	2328																X							
S0.5	1.00	2329																X							
S1	1.00	2331																X							
S5	1.00	2333																X							
S10	1.00	2335																X							
ICV	1.00	2337																X							
ICB	1.00	2338																X							
CRA	1.00	2340																X							
CCV	1.00	2342																X							
CCB	1.00	2344																X							
PBS0814E	1.00	2346																X							
LCSS0814E	1.00	2348																X							
LCSSD0814E	1.00	2350																X							
ZZZZZZ	1.00	2351																							
IDOLWPSSS090.5	1.00	2353																X							
IDOLWPSUS033.5	1.00	2355																X							
IDOLWPSUS041.0	10.00	2357																X							
IDOLTASSS110.5	1.00	2359																X							
IDOLWPSSS010.5	100.00	0001																X							
CCV	1.00	0003																X							
CCB	1.00	0005																X							
IDOLTASSS100.5	1.00	0007																X							
IDOLWPSSS170.5	1.00	0009																X							
IDOLWPSUS185.5	1.00	0010																X							
IDOLBKSSS080.5	1.00	0012																X							
IDOLBKSSS080.5S	1.00	0014																X							
IDOLBKSSS080.5D	1.00	0016																X							
IDOLWPSUS18100	1.00	0018																X							
IDOLTASSS190.3	1.00	0019																X							
IDOLTASSS200.5	1.00	0021																X							
CCV	1.00	0023																X							
CCB	1.00	0025																X							
IDOLTASUS201.0	1.00	0027																X							
CCV	1.00	0029																X							
CCB	1.00	0030																X							



**Sample Data Summary Package
For Metals**

USEPA - CLP FORMS

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPSOW No.: ILM04.1

EPA Sample No.	Lab Sample ID.
<u>IDOLBKSSS080.5SPLP</u>	<u>535904</u>
<u>IDOLBKSSS080.5SPLPD</u>	<u>535904DP</u>
<u>IDOLBKSSS080.5SPLPS</u>	<u>535904MS</u>
<u>IDOLWPSSS030.5SPLP</u>	<u>535914</u>
<u>IDOLWPSUS033.5SPLP</u>	<u>535895</u>
<u>IDOLWPSUS18100SPLP</u>	<u>535906</u>
<u>IDOLWPSUS185.5SPLP</u>	<u>535902</u>

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

Yes/No YESIf yes-were raw data generated before
application of background corrections?Yes/No NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLBKSSS080.5SPLP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPMatrix (soil/water): WATERLab Sample ID: 535904Level (low/med): LOWDate Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3490		E	P
7440-36-0	Antimony	7.2	B		P
7440-38-2	Arsenic	20.2			P
7440-39-3	Barium	47.3	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	2270	B		P
7440-47-3	Chromium	1.8	B		P
7440-48-4	Cobalt	2.0	U		P
7440-50-8	Copper	5.0	B		P
7439-89-6	Iron	2660			P
7439-92-1	Lead	1.8	B		P
7439-95-4	Magnesium	406	B		P
7439-96-5	Manganese	87.8			P
7439-97-6	Mercury	10.0	U		CV
7440-02-0	Nickel	3.0	B		P
7440-09-7	Potassium	2500	B		P
7782-49-2	Selenium	3.4	U		P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	8580			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	4.7	B		P
7440-66-6	Zinc	24.5			P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSSS030.5SPLP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPMatrix (soil/water): WATER Lab Sample ID: 535914Level (low/med): LOW Date Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2990		E	P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	32.6	B		P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	2.9	B		P
7440-70-2	Calcium	585000			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	4.6	B		P
7440-50-8	Copper	22.4	B		P
7439-89-6	Iron	33.3	U		P
7439-92-1	Lead	5.0			P
7439-95-4	Magnesium	5750			P
7439-96-5	Manganese	1100			P
7439-97-6	Mercury	10.0	U		CV
7440-02-0	Nickel	7.3	B		P
7440-09-7	Potassium	911	B		P
7782-49-2	Selenium	3.4	U		P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	8380			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	367			P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSUS033.5SPLP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPMatrix (soil/water): WATER Lab Sample ID: 535895Level (low/med): LOW Date Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3620		E	P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	30.8	B		P
7440-41-7	Beryllium	0.71	B		P
7440-43-9	Cadmium	1.6	B		P
7440-70-2	Calcium	595000			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	6.9	B		P
7440-50-8	Copper	25.5			P
7439-89-6	Iron	1130			P
7439-92-1	Lead	15.4			P
7439-95-4	Magnesium	6160			P
7439-96-5	Manganese	797			P
7439-97-6	Mercury	10.0	U		CV
7440-02-0	Nickel	7.8	B		P
7440-09-7	Potassium	986	B		P
7782-49-2	Selenium	3.4	U		P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	8470			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	244			P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSUS18100SPLP

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLP

Matrix (soil/water): WATER Lab Sample ID: 535906

Level (low/med): LOW Date Received: 07/26/03

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2690		E	P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	55.0	B		P
7440-41-7	Beryllium	0.63	B		P
7440-43-9	Cadmium	0.77	B		P
7440-70-2	Calcium	201000			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	9.4	B		P
7440-50-8	Copper	26.0			P
7439-89-6	Iron	290			P
7439-92-1	Lead	3.0			P
7439-95-4	Magnesium	3390	B		P
7439-96-5	Manganese	916			P
7439-97-6	Mercury	10.0	U		CV
7440-02-0	Nickel	10.2	B		P
7440-09-7	Potassium	2160	B		P
7782-49-2	Selenium	3.4	U		P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	8460			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	160			P

Color Before: colorless Clarity Before: clear Texture: _____

Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPSUS185.5SPLP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPMatrix (soil/water): WATER Lab Sample ID: 535902Level (low/med): LOW Date Received: 07/26/03% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2760		E	P
7440-36-0	Antimony	4.7	U		P
7440-38-2	Arsenic	4.8	U		P
7440-39-3	Barium	60.6	B		P
7440-41-7	Beryllium	0.65	B		P
7440-43-9	Cadmium	0.80	B		P
7440-70-2	Calcium	213000			P
7440-47-3	Chromium	1.4	U		P
7440-48-4	Cobalt	9.8	B		P
7440-50-8	Copper	29.9			P
7439-89-6	Iron	284			P
7439-92-1	Lead	2.1	B		P
7439-95-4	Magnesium	3410	B		P
7439-96-5	Manganese	980			P
7439-97-6	Mercury	10.0	U		CV
7440-02-0	Nickel	10.3	B		P
7440-09-7	Potassium	2240	B		P
7782-49-2	Selenium	3.4	U		P
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	24200			P
7440-28-0	Thallium	5.7	U		P
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	150			P

Color Before: colorless Clarity Before: clear Texture: _____Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPInitial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)		
Aluminum	26000.0	26270.00	101.0	30200.0	30480.00	100.9	30580.00	101.3		P
Antimony	250.0	257.90	103.2	300.0	315.70	105.2	313.50	104.5		P
Arsenic	250.0	252.30	100.9	100.0	102.40	102.4	102.70	102.7		P
Barium	500.0	494.30	98.9	200.0	200.20	100.1	200.00	100.0		P
Beryllium	500.0	504.30	100.9	100.0	99.84	99.8	99.80	99.8		P
Cadmium	500.0	491.80	98.4	100.0	98.33	98.3	97.81	97.8		P
Calcium	25000.0	25220.00	100.9	30200.0	30320.00	100.4	30200.00	100.0		P
Chromium	500.0	498.30	99.7	200.0	198.20	99.1	198.20	99.1		P
Cobalt	500.0	491.60	98.3	200.0	198.50	99.2	198.10	99.0		P
Copper	500.0	503.60	100.7	200.0	203.50	101.8	203.00	101.5		P
Iron	25500.0	26390.00	103.5	30200.0	30630.00	101.4	30730.00	101.8		P
Lead	1000.0	1005.00	100.5	400.0	399.20	99.8	398.90	99.7		P
Magnesium	25000.0	25370.00	101.5	30200.0	30260.00	100.2	30310.00	100.4		P
Manganese	500.0	493.30	98.7	200.0	199.00	99.5	198.80	99.4		P
Nickel	500.0	495.50	99.1	200.0	197.90	99.0	197.70	98.8		P
Potassium	25000.0	26500.00	106.0	30200.0	31590.00	104.6	31850.00	105.5		P
Selenium	250.0	243.80	97.5	100.0	102.90	102.9	101.30	101.3		P
Silver	500.0	497.20	99.4	100.0	99.74	99.7	100.70	100.7		P
Sodium	25000.0	25090.00	100.4	30200.0	29480.00	97.6	29950.00	99.2		P
Thallium	250.0	239.60	95.8	100.0	101.00	101.0	97.83	97.8		P
Vanadium	500.0	495.30	99.1	200.0	199.30	99.6	199.20	99.6		P
Zinc	500.0	501.50	100.3	200.0	202.50	101.2	202.60	101.3		P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPInitial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	30490.00	101.0	30200.00	100.0	P
Antimony				300.0	313.00	104.3	312.90	104.3	P
Arsenic				100.0	104.90	104.9	101.60	101.6	P
Barium				200.0	200.50	100.2	197.40	98.7	P
Beryllium				100.0	100.20	100.2	98.56	98.6	P
Cadmium				100.0	97.47	97.5	96.06	96.1	P
Calcium				30200.0	30480.00	100.9	30000.00	99.3	P
Chromium				200.0	198.10	99.0	195.40	97.7	P
Cobalt				200.0	197.90	99.0	196.60	98.3	P
Copper				200.0	202.60	101.3	200.30	100.2	P
Iron				30200.0	30790.00	102.0	30430.00	100.8	P
Lead				400.0	396.10	99.0	395.10	98.8	P
Magnesium				30200.0	30350.00	100.5	29940.00	99.1	P
Manganese				200.0	199.20	99.6	196.00	98.0	P
Nickel				200.0	197.20	98.6	195.50	97.8	P
Potassium				30200.0	31820.00	105.4	31470.00	104.2	P
Selenium				100.0	100.60	100.6	100.90	100.9	P
Silver				100.0	100.00	100.0	99.30	99.3	P
Sodium				30200.0	29990.00	99.3	29480.00	97.6	P
Thallium				100.0	99.05	99.0	99.70	99.7	P
Vanadium				200.0	198.80	99.4	196.80	98.4	P
Zinc				200.0	202.70	101.4	200.20	100.1	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPInitial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.90	96.7	5.0	4.86	97.2	4.67	93.4	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPInitial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	4.40	88.0	4.74	94.8	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPInitial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	4.69	93.8			CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPInitial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.98	99.3	5.0	4.92	98.4	4.43	88.6	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPAA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum				400.0	448.10	112.0	498.60	124.6
Antimony				120.0	129.20	107.7	130.10	108.4
Arsenic				20.0	22.07	110.4	23.22	116.1
Barium				400.0	396.90	99.2	395.80	99.0
Beryllium				10.0	10.34	103.4	10.44	104.4
Cadmium				10.0	10.35	103.5	10.21	102.1
Calcium				10000.0	10470.00	104.7	10530.00	105.3
Chromium				20.0	21.45	107.2	21.86	109.3
Cobalt				100.0	97.89	97.9	98.37	98.4
Copper				50.0	51.84	103.7	51.42	102.8
Iron				200.0	233.80	116.9	265.50	132.8
Lead				6.0	6.89	114.8	7.38	123.0
Magnesium				10000.0	10340.00	103.4	10390.00	103.9
Manganese				30.0	30.32	101.1	30.36	101.2
Nickel				80.0	80.39	100.5	80.86	101.1
Potassium				10000.0	11030.00	110.3	11020.00	110.2
Selenium				10.0	7.75	77.5	8.13	81.3
Silver				20.0	19.86	99.3	20.31	101.6
Sodium				10000.0	10220.00	102.2	10120.00	101.2
Thallium				20.0	17.74	88.7	21.02	105.1
Vanadium				100.0	100.40	100.4	100.30	100.3
Zinc				40.0	41.43	103.6	41.58	104.0

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPAA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Found	%R	Final Found	%R
Mercury	0.2	0.17	85.0					

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPAA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury	0.2	0.24	120.0					

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001-SPLPPreparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum	-96.2	B	-85.9	B	-91.8	B	-101.6	B	-90.310	B	P
Antimony	4.7	U	4.7	U	4.7	U	4.7	U	4.700	U	P
Arsenic	4.8	U	4.8	U	4.8	U	4.8	U	4.800	U	P
Barium	5.9	U	5.9	U	5.9	U	5.9	U	5.900	U	P
Beryllium	0.2	B	0.2	U	0.2	U	0.2	U	0.200	U	P
Cadmium	0.6	U	0.6	U	0.6	U	0.6	U	0.600	U	P
Calcium	182.1	U	182.1	U	182.1	U	182.1	U	182.100	U	P
Chromium	1.4	U	1.4	U	1.4	U	1.4	U	1.400	U	P
Cobalt	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	P
Copper	2.4	U	2.4	U	2.4	U	2.4	U	2.400	U	P
Iron	-48.3	B	-44.0	B	-45.0	B	33.3	U	-54.690	B	P
Lead	1.3	U	1.3	U	1.3	U	1.9	B	1.300	U	P
Magnesium	178.3	U	178.3	U	178.3	U	178.3	U	178.300	U	P
Manganese	0.7	U	0.7	U	0.7	U	0.7	U	0.700	U	P
Nickel	2.1	U	2.1	U	2.1	U	2.1	U	2.100	U	P
Potassium	393.0	U	393.0	U	393.0	U	393.0	U	393.000	U	P
Selenium	3.4	U	3.4	U	3.4	U	3.4	U	3.400	U	P
Silver	2.2	U	2.2	U	2.2	U	2.2	U	2.200	U	P
Sodium	472.7	U	472.7	U	472.7	U	472.7	U	472.700	U	P
Thallium	5.7	U	5.7	U	5.7	U	5.7	U	5.700	U	P
Vanadium	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	P
Zinc	1.0	U	1.0	U	1.0	U	1.0	U	1.122	B	P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPPreparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						SPLP Preparation Blank	C	M
			1	C	2	C	3	C			
Aluminum			-90.0	B					-92.180	B	P
Antimony			4.7	U					4.700	U	P
Arsenic			4.8	U					4.800	U	P
Barium			5.9	U					5.900	U	P
Beryllium			0.2	U					0.200	U	P
Cadmium			0.6	U					0.600	U	P
Calcium			182.1	U					385.800	B	P
Chromium			1.4	U					1.400	U	P
Cobalt			2.0	U					2.000	U	P
Copper			2.4	U					2.400	U	P
Iron			33.3	U					-49.810	B	P
Lead			1.3	U					1.547	B	P
Magnesium			178.3	U					178.300	U	P
Manganese			0.7	U					0.700	U	P
Mercury									10.000	U	CV
Nickel			2.1	U					2.100	U	P
Potassium			393.0	U					393.000	U	P
Selenium			3.4	U					3.400	U	P
Silver			2.2	U					2.200	U	P
Sodium			472.7	U					6469.000		P
Thallium			5.7	U					5.700	U	P
Vanadium			2.0	U					2.000	U	P
Zinc			1.0	U					4.301	B	P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPPreparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.100	U	CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPPreparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury			0.1	U	0.1	U					CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPPreparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury	0.1	U	0.1	U	0.1	U					CV

USEPA - CLP FORMS

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLP

ICP ID Number: TJA ICAP 4 ICS Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	477680	509600	513000.0	107.4	513500	514100.0	107.6
Antimony	0	575	-3	630.2	109.6	-1	632.5	110.0
Arsenic	0	97	8	104.0	107.2	5	104.2	107.4
Barium	0	464	2	496.8	107.1	3	496.6	107.0
Beryllium	0	444	0	472.8	106.5	0	475.3	107.0
Cadmium	0	874	-1	925.2	105.9	-1	923.2	105.6
Calcium	500000	476380	491400	499900.0	104.9	493300	501100.0	105.2
Chromium	0	451	4	478.5	106.1	4	480.2	106.5
Cobalt	0	434	-1	456.9	105.3	-1	458.8	105.7
Copper	0	482	4	516.1	107.1	3	515.6	107.0
Iron	200000	192500	204000	202500.0	105.2	205200	203400.0	105.7
Lead	0	41	-1	44.9	109.5	3	45.0	109.8
Magnesium	500000	524140	540200	548000.0	104.6	542100	550100.0	105.0
Manganese	0	451	1	479.0	106.2	2	479.1	106.2
Nickel	0	876	1	926.4	105.8	2	930.4	106.2
Potassium	0	0	-76	-80.5		-86	-85.3	
Selenium	0	41	-7	40.8	99.5	-5	46.2	112.7
Silver	0	198	1	210.5	106.3	0	211.4	106.8
Sodium	0	0	-72	-158.7		-48	-225.8	
Thallium	0	83	-7	84.9	102.3	-3	88.5	106.6
Vanadium	0	464	2	494.5	106.6	2	495.4	106.8
Zinc	0	951	4	999.3	105.1	4	1001.0	105.3

USEPA - CLP FORMS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLBKSSS080.5SPLPS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPMatrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75 - 125	1111.0000		20.1500		1000.00	109.0		P
Barium	75 - 125	2202.0000		47.3300	B	2000.00	107.7		P
Cadmium	75 - 125	54.1400		0.6000	U	50.00	108.3		P
Chromium	75 - 125	221.7000		1.7660	B	200.00	110.0		P
Copper	75 - 125	282.6000		4.9770	B	250.00	111.0		P
Lead	75 - 125	554.5000		1.7560	B	500.00	110.6		P
Mercury	75 - 125	85.9000		10.0000	U	100.00	85.9		CV
Nickel	75 - 125	546.5000		2.9540	B	500.00	108.7		P
Selenium	75 - 125	2113.0000		3.4000	U	2000.00	105.6		P
Silver	75 - 125	512.2000		2.2000	U	500.00	102.4		P
Zinc	75 - 125	580.9000		24.4600		500.00	111.3		P

Comments:

USEPA - CLP FORMS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLBKSSS080.5SPLPA

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS SDG No.: IDS001-SPLPMatrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		5549.00		3489.00		2000.0	103.0		P
Antimony		525.30		7.16	B	500.0	103.6		P
Arsenic		53.83		20.15		40.0	84.2		P
Barium		1967.00		47.33	B	2000.0	96.0		P
Beryllium		49.53		0.20	U	50.0	99.1		P
Cadmium		49.34		0.60	U	50.0	98.7		P
Chromium		202.50		1.77	B	200.0	100.4		P
Cobalt		490.90		2.00	U	500.0	98.2		P
Copper		259.20		4.98	B	250.0	101.7		P
Iron		3693.00		2663.00		1000.0	103.0		P
Lead		20.50		1.76	B	20.0	93.7		P
Manganese		585.50		87.79		500.0	99.5		P
Nickel		495.30		2.95	B	500.0	98.5		P
Selenium		10.72		3.40	U	10.0	107.2		P
Silver		31.81		2.20	U	50.0	63.6		P
Thallium		43.80		5.70	U	50.0	87.6		P
Vanadium		501.70		4.66	B	500.0	99.4		P
Zinc		528.10		24.46		500.0	100.7		P

Comments: _____

USEPA - CLP FORMS

6

DUPLICATES

SAMPLE NO.

IDOLBKSSS080.5SPLPD

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPMatrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0 % Solids for Duplicate: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		3489.0000		3665.0000		4.9		P
Antimony		7.1590	B	8.5150	B	17.3		P
Arsenic	10.0	20.1500		20.8400		3.4		P
Barium		47.3300	B	46.7500	B	1.2		P
Beryllium		0.2000	U	0.2000	U			P
Cadmium		0.6000	U	0.6000	U			P
Calcium		2271.0000	B	2257.0000	B	0.6		P
Chromium		1.7660	B	1.6730	B	5.4		P
Cobalt		2.0000	U	2.0000	U			P
Copper		4.9770	B	6.5800	B	27.7		P
Iron		2663.0000		2769.0000		3.9		P
Lead		1.7560	B	1.3670	B	24.9		P
Magnesium		405.9000	B	423.6000	B	4.3		P
Manganese		87.7900		90.4300		3.0		P
Mercury		10.0000	U	10.0000	U			CV
Nickel		2.9540	B	2.1000	U	200.0		P
Potassium		2501.0000	B	2595.0000	B	3.7		P
Selenium		3.4000	U	3.4000	U			P
Silver		2.2000	U	2.2000	U			P
Sodium	5000.0	8579.0000		8864.0000		3.3		P
Thallium		5.7000	U	5.7000	U			P
Vanadium		4.6590	B	4.4840	B	3.8		P
Zinc	20.0	24.4600		23.6000		3.6		P

USEPA - CLP FORMS

6

DUPLICATES

SAMPLE NO.

LCSDW0909C

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPMatrix (soil/water): WATER Level (low/med): LOW% Solids for Sample: 0.0 % Solids for Duplicate: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		52100.00		51460.00		1.2		P
Antimony		2102.00		2066.00		1.7		P
Arsenic		1049.00		1042.00		0.7		P
Barium		499.80		493.20		1.3		P
Beryllium		502.10		496.30		1.2		P
Cadmium		509.90		505.30		0.9		P
Calcium		50480.00		49990.00		1.0		P
Chromium		499.30		493.70		1.1		P
Cobalt		490.70		484.90		1.2		P
Copper		516.50		508.20		1.6		P
Iron		52270.00		51660.00		1.2		P
Lead		1009.00		992.80		1.6		P
Magnesium		50890.00		50450.00		0.9		P
Manganese		495.80		489.30		1.3		P
Nickel		493.10		486.90		1.3		P
Potassium		50390.00		49720.00		1.3		P
Selenium		508.60		502.00		1.3		P
Silver		437.80		433.60		1.0		P
Sodium		52000.00		51160.00		1.6		P
Thallium		533.50		527.40		1.1		P
Vanadium		504.60		498.80		1.2		P
Zinc		501.80		491.80		2.0		P

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLP

Solid LCS Source: _____

Aqueous LCS Source: Inorganic Ventures

Analyte	Aqueous (ug/L)			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits	%R	
Aluminum	51000.0	52100.00	102.2						
Antimony	2000.0	2102.00	105.1						
Arsenic	1050.0	1049.00	99.9						
Barium	500.0	499.80	100.0						
Beryllium	500.0	502.10	100.4						
Cadmium	525.0	509.90	97.1						
Calcium	50000.0	50480.00	101.0						
Chromium	500.0	499.30	99.9						
Cobalt	500.0	490.70	98.1						
Copper	500.0	516.50	103.3						
Iron	50500.0	52270.00	103.5						
Lead	1015.0	1009.00	99.4						
Magnesium	50000.0	50890.00	101.8						
Manganese	500.0	495.80	99.2						
Nickel	500.0	493.10	98.6						
Potassium	50000.0	50390.00	100.8						
Selenium	525.0	508.60	96.9						
Silver	500.0	437.80	87.6						
Sodium	50000.0	52000.00	104.0						
Thallium	550.0	533.50	97.0						
Vanadium	500.0	504.60	100.9						
Zinc	500.0	501.80	100.4						

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDS001-SPLPSolid LCS Source: Aqueous LCS Source: Inorganic Ventures

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Mercury	1.00	0.91	91.0					

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLP

Solid LCS Source: _____

Aqueous LCS Source: Inorganic Ventures

Analyte	Aqueous (ug/L)			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits	%R	
Aluminum	51000.0	51460.00	100.9						
Antimony	2000.0	2066.00	103.3						
Arsenic	1050.0	1042.00	99.2						
Barium	500.0	493.20	98.6						
Beryllium	500.0	496.30	99.3						
Cadmium	525.0	505.30	96.2						
Calcium	50000.0	49990.00	100.0						
Chromium	500.0	493.70	98.7						
Cobalt	500.0	484.90	97.0						
Copper	500.0	508.20	101.6						
Iron	50500.0	51660.00	102.3						
Lead	1015.0	992.80	97.8						
Magnesium	50000.0	50450.00	100.9						
Manganese	500.0	489.30	97.9						
Nickel	500.0	486.90	97.4						
Potassium	50000.0	49720.00	99.4						
Selenium	525.0	502.00	95.6						
Silver	500.0	433.60	86.7						
Sodium	50000.0	51160.00	102.3						
Thallium	550.0	527.40	95.9						
Vanadium	500.0	498.80	99.8						
Zinc	500.0	491.80	98.4						

USEPA - CLP FORMS

9

ICP SERIAL DILUTIONS

SAMPLE NO.

IDOLBKSSS080.5SPLPL

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046SAS No.: _____ SDG No.: IDS001-SPLPMatrix (soil/water): WATERLevel (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ- ence	Q	M
		C		C			
Aluminum	3489.00		3091.00		11.4	E	P
Antimony	7.16	B	23.50	U	100.0		P
Arsenic	20.15		28.23	B	40.1		P
Barium	47.33	B	49.37	B	4.3		P
Beryllium	0.20	U	1.00	U			P
Cadmium	0.60	U	3.00	U			P
Calcium	2271.00	B	1894.00	B	16.6		P
Chromium	1.77	B	7.00	U	100.0		P
Cobalt	2.00	U	10.00	U			P
Copper	4.98	B	12.00	U	100.0		P
Iron	2663.00		2476.00		7.0		P
Lead	1.76	B	6.50	U	100.0		P
Magnesium	405.90	B	891.50	U	100.0		P
Manganese	87.79		87.84		0.1		P
Nickel	2.95	B	10.50	U	100.0		P
Potassium	2501.00	B	2661.00	B	6.4		P
Selenium	3.40	U	17.00	U			P
Silver	2.20	U	11.00	U			P
Sodium	8579.00		8543.00	B	0.4		P
Thallium	5.70	U	28.50	U			P
Vanadium	4.66	B	10.00	U	100.0		P
Zinc	24.46		30.73	B	25.6		P

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPICP ID Number: _____ Date: 07/01/03Flame AA ID Number: Leeman Hydra AA

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Mercury	253.70		0.2	0.10	CV

Comments: _____

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046

SAS No.: _____

SDG No.: IDS001-SPLPICP ID Number: TJA ICAP 4Date: 07/01/03

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.215		200	23.6	P
Antimony	206.838		60	4.7	P
Arsenic	189.042		10	4.8	P
Barium	493.409		200	5.9	P
Beryllium	313.042		5	0.2	P
Cadmium	226.502		5	0.6	P
Calcium	317.933		5000	182.1	P
Chromium	267.716		10	1.4	P
Cobalt	228.616		50	2.0	P
Copper	324.754		25	2.4	P
Iron	271.441		100	33.3	P
Lead	220.353		3	1.3	P
Magnesium	279.078		5000	178.3	P
Manganese	257.610		15	0.7	P
Nickel	231.604		40	2.1	P
Potassium	766.491		5000	393.0	P
Selenium	196.026		5	3.4	P
Silver	328.068		10	2.2	P
Sodium	330.232		5000	472.7	P
Thallium	190.864		10	5.7	P
Vanadium	292.402		50	2.0	P
Zinc	213.856		20	1.0	P

Comments: _____

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLP

ICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ba
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	-0.0000600	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0008950	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000330	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0004320
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0006300	0.0000000	0.0000090	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000200	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	-0.0000220	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0000200	0.0000000	-0.0000900	0.0000000	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000490	0.0000000	0.0000000
Zinc	213.86	0.0000250	0.0000000	0.0000630	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	Mn	Mo
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0072400
Antimony	206.84	0.0000000	0.0111600	0.0000000	0.0000000	-0.0024800
Arsenic	189.04	0.0000000	0.0004700	0.0000000	0.0000000	0.0013380
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0001150	0.0000000	0.0000000	0.0000000	0.0001350
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	-0.0016380
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.1059800	0.0000000	0.0000000	0.0000000	0.0036200
Lead	220.35	-0.0022600	-0.0001190	0.0000000	0.0000000	-0.0007540
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0004300	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	-0.0038600	0.0000000	0.0000000	-0.0042750
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	-0.0007920
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0032700	0.0002540	0.0000000	-0.008140	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	-0.0160000
Zinc	213.86	0.0000000	0.0000000	0.0003300	0.0000000	0.0000000

Comments: _____

USEPA - CLP FORMS

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001-SPLPICP ID Number: TJA ICAP 4Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Ni	Sb	Sn	V	Zn
Aluminum	308.22	0.0000000	0.0000000	0.1440400	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0006280	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	-0.000192	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0237000	0.0000000
Lead	220.35	0.0001240	-0.0002280	0.0000000	0.0005020	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0001660	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	-0.1212200	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.1177000
Thallium	190.86	0.0000000	0.0000000	0.0000000	0.0025400	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.86	0.0052400	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

ICP LINEAR RANGES (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001-SPLPICP ID Number: TJA ICAP 4Date: 07/01/03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	10.00	1000000.0	P
Antimony	10.00	100000.0	P
Arsenic	10.00	5000.0	P
Barium	10.00	10000.0	P
Beryllium	10.00	5000.0	P
Cadmium	10.00	5000.0	P
Calcium	10.00	600000.0	P
Chromium	10.00	100000.0	P
Cobalt	10.00	100000.0	P
Copper	10.00	10000.0	P
Iron	10.00	1000000.0	P
Lead	10.00	10000.0	P
Magnesium	10.00	500000.0	P
Manganese	10.00	10000.0	P
Nickel	10.00	10000.0	P
Potassium	10.00	100000.0	P
Selenium	10.00	5000.0	P
Silver	10.00	2000.0	P
Sodium	10.00	100000.0	P
Thallium	10.00	5000.0	P
Vanadium	10.00	100000.0	P
Zinc	10.00	5000.0	P

Comments: _____

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPMethod: CV

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
EBLKP8	08/14/03	1.0	100.0
IDOLBKSSS080.5SPLP	08/14/03	1.0	100.0
IDOLBKSSS080.5SPLPD	08/14/03	1.0	100.0
IDOLBKSSS080.5SPLPS	08/14/03	1.0	100.0
IDOLWPSSS030.5SPLP	08/14/03	1.0	100.0
IDOLWPSUS033.5SPLP	08/14/03	1.0	100.0
IDOLWPSUS18100SPLP	08/14/03	1.0	100.0
IDOLWPSUS185.5SPLP	08/14/03	1.0	100.0
LCSW0814G	08/14/03	100.0	100.0
PBW0814G	08/14/03	100.0	100.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDS001-SPLPMethod: P

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
IDOLBKSSS080.5SPLP	09/09/03	100.0	100.0
IDOLBKSSS080.5SPLPD	09/09/03	100.0	100.0
IDOLBKSSS080.5SPLPS	09/09/03	100.0	100.0
IDOLWPSSS030.5SPLP	09/09/03	100.0	100.0
IDOLWPSUS033.5SPLP	09/09/03	100.0	100.0
IDOLWPSUS18100SPLP	09/09/03	100.0	100.0
IDOLWPSUS185.5SPLP	09/09/03	100.0	100.0
LCSDW0909C	09/09/03	100.0	100.0
LCSW0909C	09/09/03	100.0	100.0
PBW0909C	09/09/03	100.0	100.0
SPLPBLKP8	09/09/03	100.0	100.0

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001-SPLPInstrument ID Number: TJA ICAP 4Method: PStart Date: 09/18/03End Date: 09/18/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N
S0	1.00	1304		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
S	1.00	1309		X					X					X	X					X			X		
S	1.00	1313			X	X									X					X			X		
S	1.00	1316					X	X	X		X	X	X			X		X			X			X	X
LRS	1.00	1321		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
LRS	1.00	1326		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
LRS	1.00	1331		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICV	1.00	1335		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICB	1.00	1340		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICSA	1.00	1345		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ICSAB	1.00	1350		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CRI	1.00	1354		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCV	1.00	1359		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCB	1.00	1404		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
PBW0909C	1.00	1408		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
LCSW0909C	1.00	1413		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
LCSDW0909C	1.00	1418		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLWPSUS033.5SPLP	1.00	1423		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLWPSUS185.5SPLP	1.00	1428		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLBKSSS080.5SPLP	1.00	1433		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLBKSSS080.5SPLPL	5.00	1437		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLBKSSS080.5SPLPA	1.00	1442		X	X	X	X	X	X		X	X	X	X	X		X		X	X		X	X	X	X
IDOLBKSSS080.5SPLPD	1.00	1446		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLBKSSS080.5SPLPS	1.00	1451				X	X		X		X		X		X				X	X	X				X
CCV	1.00	1456		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCB	1.00	1501		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLWPSUS18100SPLP	1.00	1505		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
IDOLWPSSS030.5SPLP	1.00	1510		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
SPLPBLKP8	1.00	1515		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
ZZZZZZ	1.00	1520																							
ZZZZZZ	1.00	1525																							
ZZZZZZ	10.00	1529																							
ZZZZZZ	1.00	1534																							
ZZZZZZ	10.00	1539																							
ZZZZZZ	1.00	1543																							
ZZZZZZ	1.00	1548																							
CCV	1.00	1553		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
CCB	1.00	1557		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001-SPLPInstrument ID Number: TJA ICAP 4Method: PStart Date: 09/18/03End Date: 09/18/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T L	V N	Z N	C N
ZZZZZZ	10.00	1602																									
ZZZZZZ	1.00	1607																									
ZZZZZZ	1.00	1611																									
ICSA	1.00	1616		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
ICSAB	1.00	1621		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
CRI	1.00	1625		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
CCV	1.00	1630		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
CCB	1.00	1635		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X

USEPA - CLP FORMS

14

ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001-SPLPInstrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/18/03End Date: 08/18/03

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
S0	1.00	1132															X												
S0.2	1.00	1133															X												
S0	1.00	1135															X												
S0.2	1.00	1137															X												
S0.5	1.00	1139															X												
S1	1.00	1140															X												
S5	1.00	1142															X												
S10	1.00	1144															X												
ICV	1.00	1146															X												
ICB	1.00	1147															X												
CRA	1.00	1149															X												
CCV	1.00	1151															X												
CCB	1.00	1152															X												
ZZZZZZ	1.00	1154																											
ZZZZZZ	1.00	1156																											
ZZZZZZ	1.00	1158																											
ZZZZZZ	1.00	1200																											
ZZZZZZ	1.00	1202																											
ZZZZZZ	1.00	1204																											
ZZZZZZ	1.00	1205																											
ZZZZZZ	1.00	1207																											
ZZZZZZ	1.00	1209																											
CCV	1.00	1211															X												
CCB	1.00	1212															X												
ZZZZZZ	1.00	1214																											
ZZZZZZ	1.00	1216																											
ZZZZZZ	1.00	1217																											
ZZZZZZ	1.00	1219																											
ZZZZZZ	1.00	1221																											
ZZZZZZ	1.00	1223																											
ZZZZZZ	1.00	1225																											
ZZZZZZ	1.00	1227																											
ZZZZZZ	1.00	1228																											
CCV	1.00	1230															X												
CCB	1.00	1232															X												
ZZZZZZ	1.00	1234																											
ZZZZZZ	1.00	1236																											
ZZZZZZ	1.00	1239																											

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001-SPLPInstrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/18/03End Date: 08/18/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N
ZZZZZZ	1.00	1240																									
ZZZZZZ	1.00	1242																									
PBW0814G	1.00	1244															X										
LCSW0814G	1.00	1246															X										
ZZZZZZ	1.00	1248																									
ZZZZZZ	1.00	1250																									
CCV	1.00	1252															X										
CCB	1.00	1254															X										
ZZZZZZ	1.00	1256																									
ZZZZZZ	1.00	1257																									
ZZZZZZ	1.00	1259																									
ZZZZZZ	1.00	1301																									
ZZZZZZ	1.00	1303																									
IDOLWPSUS033.5SPLP	1.00	1305															X										
IDOLWPSUS185.5SPLP	1.00	1306															X										
IDOLBKSSS080.5SPLP	1.00	1308															X										
IDOLBKSSS080.5SPLPS	1.00	1311															X										
CCV	1.00	1312															X										
CCB	1.00	1314															X										

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDS001-SPLPInstrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/18/03End Date: 08/18/03

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
S0	1.00	1332															X														
S0.2	1.00	1334															X														
S0.5	1.00	1336															X														
S1	1.00	1338															X														
S5	1.00	1339															X														
S10	1.00	1341															X														
ICV	1.00	1343															X														
ICB	1.00	1345															X														
CRA	1.00	1347															X														
CCV	1.00	1349															X														
CCB	1.00	1350															X														
IDOLBKSSS080.5SPLPD	1.00	1352															X														
IDOLWPSUS18100SPLP	1.00	1354															X														
IDOLWPSSS030.5SPLP	1.00	1356															X														
EBLKP8	1.00	1358															X														
ZZZZZZ	1.00	1400																													
ZZZZZZ	1.00	1402																													
ZZZZZZ	1.00	1404																													
ZZZZZZ	1.00	1406																													
ZZZZZZ	1.00	1408																													
CCV	1.00	1409															X														
CCB	1.00	1411															X														

September 19, 2003

Ms. Jennifer Kindred
EA Engineering
12011 Bellevue-Redmond Rd.
Suite 200
Bellevue, WA 98005

Re: Laboratory Project No. 23046
Case No. 23046; SDG: IDV001

Dear Ms. Kindred:

Enclosed are the analytical results of samples received intact by Severn Trent Laboratories on July 25, 2003. Laboratory numbers have been assigned and designated as follows:

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Sample Date</u>	<u>Sample Matrix</u>
Received: 07/25/03 ETR No: 94999			
535838	IDOLBGREPLT08RICE	07/22/03	Solid
535839	IDOLTAPLT10RICE	07/22/03	Solid
535839MS	IDOLTAPLT10RICEMS	07/22/03	Solid
535839DP	IDOLTAPLT10RICEREP	07/22/03	Solid
535840	IDOLTAPLT10100RICE	07/22/03	Solid
535841	IDOLWPPLT09RICE	07/22/03	Solid
535842	IDOLTAPLT11RICE	07/22/03	Solid
535860	EBLK		Water

Due to reporting software limitations, sample identifications may have been truncated. In most instances only punctuation was removed.

This narrative identifies anomalies that occurred during the analyses of samples in this delivery group. If there is no description following regarding a certain methodology requested on the chain-of-custody record, then there were no exceptions to the laboratory quality control criteria noted during that analysis.

Documentation that identifies the condition of the samples at the time of sample receipt and the issues arising at the time of sample log-in is included in the Sample Handling section of this submittal.

The plant samples were homogenized for analysis by the lab and after homogenization the tissue was maintained in frozen storage at -20 °C.

The results for the tissue samples are reported on a dry weight basis. In preparing the tissues, an equipment bank was generated in order to characterize the homogenization process. This

Severn Trent Laboratories, Inc.

STL Burlington • 208 South Park Drive, Suite 1, Colchester, VT 05446

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blank, identified as "EBLK", was carried through each of the analytical processes, using weighed amounts similar to the tissue amounts that were analyzed. The results have been reported on the same weight/weight basis as the tissue samples.

Metals by ICP / CVAA

The percent difference between the original determination and the serial dilution determination for potassium in sample IDOLTAPLT10RICE was 21.9 percent. This recovery is above the control criteria of ± 10 percent. Matrix interference is suspected and results have been flagged with an "E" accordingly.

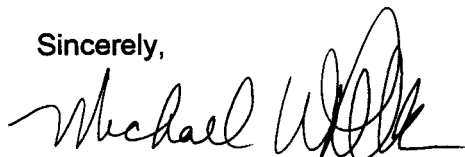
The recovery of cyanide from the laboratory fortified aliquot of sample IDOLTAPLT10RICE was 68.6 percent which is below the control limit of 75-100 percent. Corresponding sample results have been qualified with an "N" to denote this anomaly. Recovery from the post digestate spike proved acceptable as did recovery from the laboratory control sample.

If there are any questions regarding this submittal, please contact Jeannine McCrumb at (802) 655-1203.

This report shall not be reproduced, except in full, without the written approval of the laboratory. This report is sequentially numbered starting with page 0001 and ending with page _____.

I certify that this package is in compliance with the NELAC requirements, both technically and for completeness, for other than the conditions detailed above. The release of the data contained in this hardcopy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Wheeler", with a stylized flourish at the end.

Michael F. Wheeler, Ph.D.
Laboratory Director

Enclosure
MFW/jtw/jmm

**STL Burlington
Colchester, Vermont**

**Sample Data Summary
Package**

SDG: IDV001

CHAIN OF CUSTODY RECORD

Report to:				Invoice to:				ANALYSIS REQUESTED		Lab Use Only	
Company: EA ENGINEERING				Company: SAME						Temp. of coolers when received (C°):	
Address: 12011 BELLEVUE-REDMOND RD.				Address:						1 2 3 4 5	
Contact: CATHY BOHLKE				Contact:						Custody Seal N / Y	
Phone: 425-451-7400 x 144				Phone:						Intact N / Y	
Fax: 425-451-7800				Fax:						Screened For Radioactivity <input type="checkbox"/>	
Contract/Quote: IDOL CITY MINE				Sampler's Signature: SANDRA T. KOSER							
Project Name: IDOL CITY MINE				No/Type of Containers: 600 LITERS							
Identifying Marks of Sample(s)				A/G 1 L. VOA 500 mL P/O							
Matrix	Date	Time	Sample	IDOL-BE/RE-PLT-D8-RICE							
153	7/24/02	1230	X								
1	7/24/02	1430	1	IDOL-TA-PLT-ID-RICE							
1	7/24/02	1430	1	IDOL-TA-PLT-ID-100-RICE							
1	7/24/02	1430	1	IDOL-TA-PLT-ID-MS-RICE							
1	7/24/02	1430	1	IDOL-WP-PLT-09-RICE							
1	7/24/02	1430	1	IDOL-TA-PLT-11-RICE							
1	7/24/02	1430	1	IDOL-ST-SSD-05							
1	7/24/02	1430	1	IDOL-PD-SSD-14							
1	7/24/02	1430	1	IDOL-PD-SSD-14-100							
1	7/24/02	1430	1	IDOL-PD-SSD-14-MS							

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Remarks
Sandra T. Koser	7/24/02	0900	[Signature]	7/25/02	0930	COPY - ORIGINAL ON FILE SDG # 10001 ETR # 95007
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	

Matrix	WW - Wastewater	W - Water	S - Sol	L - Liquid	A - Air bag	C - Charcoal Tube	SL - Sludge	Oil
VOA - 40 ml vial	A/G - Amber / Or Class 1	250 ml - Glass wide mouth	P/O - Plastic or other					

Client's delivery of samples constitutes acceptance of Severn Trent Laboratories terms and conditions contained in the Price Schedule.

STL cannot accept verbal changes.
Please Fax written changes to
(802) 655-1248



**Sample Data Summary Package
For Wet Chemistry**

WET CHEMISTRY

Sample Report Summary

Client Sample No. _____

IDOLBGREPLT08RICE

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDV001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535838

Matrix: SOLID

Client: EASEAT

Date Received: 07/25/03

% Solids: 35.7

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		35.7	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLTAPLT10RICE

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDV001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535839

Matrix: SOLID

Client: EASEAT

Date Received: 07/25/03

% Solids: 41.8

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		41.8	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLTAPLT10100RICE

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDV001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535840

Matrix: SOLID

Client: EASEAT

Date Received: 07/25/03

% Solids: 38.7

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		38.7	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLWPPLT09RICE

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDV001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535841

Matrix: SOLID

Client: EASEAT

Date Received: 07/25/03

% Solids: 40.4

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		40.4	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

IDOLTAPLT11RICE

Lab Name: STL BURLINGTON**Contract:**

SDG No.: IDV001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535842

Matrix: SOLID

Client: EASEAT

Date Received: 07/25/03

% Solids: 36.1

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		36.1	

WET CHEMISTRY

Sample Report Summary

Client Sample No.

EBLK

Lab Name: STL BURLINGTON

Contract:

SDG No.: IDV001

Lab Code: STLVT

Case No.: 23046

Lab Sample ID: 535860

Matrix: WATER

Client: EASEAT

Date Received: 07/25/03

% Solids: 0.0

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
IN623	Solids, Percent	07/29/03	N/A	%	1.0		0.0	



**Sample Data Summary Package
For Metals**

USEPA - CLP FORMS

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001SOW No.: ILM04.1

EPA Sample No.	Lab Sample ID.
<u>EBLK</u>	<u>535860</u>
<u>IDOLBGREPLT08RICE</u>	<u>535838</u>
<u>IDOLTAPLT10100RICE</u>	<u>535840</u>
<u>IDOLTAPLT10RICE</u>	<u>535839</u>
<u>IDOLTAPLT10RICED</u>	<u>535839DP</u>
<u>IDOLTAPLT10RICES</u>	<u>535839MS</u>
<u>IDOLTAPLT11RICE</u>	<u>535842</u>
<u>IDOLWPPLT09RICE</u>	<u>535841</u>

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

Yes/No YESIf yes-were raw data generated before
application of background corrections?Yes/No NOComments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: _____

Date: _____

Title: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

EBLK

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Matrix (soil/water): TISSUELab Sample ID: 535860Level (low/med): LOWDate Received: 07/25/03% Solids: 100.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2.4	U		P
7440-36-0	Antimony	0.47	U		P
7440-38-2	Arsenic	0.48	U		P
7440-39-3	Barium	0.59	U		P
7440-41-7	Beryllium	0.020	U		P
7440-43-9	Cadmium	0.060	U		P
7440-70-2	Calcium	18.2	U		P
7440-47-3	Chromium	0.14	U		P
7440-48-4	Cobalt	0.20	U		P
7440-50-8	Copper	0.24	U		P
7439-89-6	Iron	3.3	U		P
7439-92-1	Lead	0.32			P
7439-95-4	Magnesium	17.8	U		P
7439-96-5	Manganese	0.070	U		P
7439-97-6	Mercury	0.016	U		CV
7440-02-0	Nickel	0.21	U		P
7440-09-7	Potassium	39.3	U	E	P
7782-49-2	Selenium	0.34	U		P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	72.2	B		P
7440-28-0	Thallium	0.57	U		P
7440-62-2	Vanadium	0.20	U		P
7440-66-6	Zinc	0.20	B		P
57-12-5	Cyanide	0.50	U	N	AS

Color Before: colorlessClarity Before: clear

Texture: _____

Color After: colorlessClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLBGREPLT08RICE

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Matrix (soil/water): TISSUELab Sample ID: 535838Level (low/med): LOWDate Received: 07/25/03% Solids: 100.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	41.3			P
7440-36-0	Antimony	0.47	U		P
7440-38-2	Arsenic	0.48	U		P
7440-39-3	Barium	70.1			P
7440-41-7	Beryllium	0.020	U		P
7440-43-9	Cadmium	0.060	U		P
7440-70-2	Calcium	6930			P
7440-47-3	Chromium	0.18	B		P
7440-48-4	Cobalt	0.20	U		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	47.8			P
7439-92-1	Lead	0.22	B		P
7439-95-4	Magnesium	991			P
7439-96-5	Manganese	22.4			P
7439-97-6	Mercury	0.029	B		CV
7440-02-0	Nickel	0.21	U		P
7440-09-7	Potassium	5740		E	P
7782-49-2	Selenium	0.42	B		P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	89.7	B		P
7440-28-0	Thallium	0.57	U		P
7440-62-2	Vanadium	0.20	U		P
7440-66-6	Zinc	7.5			P
57-12-5	Cyanide	0.50	U	N	AS

Color Before: green

Clarity Before: _____

Texture: mediumColor After: pale yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLTAPLT10100RICE

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001

Matrix (soil/water): TISSUE Lab Sample ID: 535840

Level (low/med): LOW Date Received: 07/25/03

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	59.5			P
7440-36-0	Antimony	0.44	U		P
7440-38-2	Arsenic	0.45	U		P
7440-39-3	Barium	71.4			P
7440-41-7	Beryllium	0.019	U		P
7440-43-9	Cadmium	0.057	U		P
7440-70-2	Calcium	6700			P
7440-47-3	Chromium	0.39	B		P
7440-48-4	Cobalt	0.19	U		P
7440-50-8	Copper	1.9	B		P
7439-89-6	Iron	68.6			P
7439-92-1	Lead	0.41			P
7439-95-4	Magnesium	1030			P
7439-96-5	Manganese	47.7			P
7439-97-6	Mercury	0.018	B		CV
7440-02-0	Nickel	0.20	U		P
7440-09-7	Potassium	5650		E	P
7782-49-2	Selenium	0.45	B		P
7440-22-4	Silver	0.21	U		P
7440-23-5	Sodium	74.1	B		P
7440-28-0	Thallium	0.54	U		P
7440-62-2	Vanadium	0.19	U		P
7440-66-6	Zinc	12.1			P
57-12-5	Cyanide	0.50	U	N	AS

Color Before: green Clarity Before: _____ Texture: mediumColor After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLTAPLT10RICE

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Matrix (soil/water): TISSUELab Sample ID: 535839Level (low/med): LOWDate Received: 07/25/03% Solids: 100.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	66.7			P
7440-36-0	Antimony	0.45	U		P
7440-38-2	Arsenic	0.46	U		P
7440-39-3	Barium	72.3			P
7440-41-7	Beryllium	0.019	U		P
7440-43-9	Cadmium	0.057	U		P
7440-70-2	Calcium	7470			P
7440-47-3	Chromium	0.18	B		P
7440-48-4	Cobalt	0.19	U		P
7440-50-8	Copper	1.9	B		P
7439-89-6	Iron	68.2			P
7439-92-1	Lead	0.40			P
7439-95-4	Magnesium	1100			P
7439-96-5	Manganese	50.1			P
7439-97-6	Mercury	0.021	B		CV
7440-02-0	Nickel	0.20	U		P
7440-09-7	Potassium	5870		E	P
7782-49-2	Selenium	0.48			P
7440-22-4	Silver	0.21	U		P
7440-23-5	Sodium	65.7	B		P
7440-28-0	Thallium	0.54	U		P
7440-62-2	Vanadium	0.19	U		P
7440-66-6	Zinc	11.7			P
57-12-5	Cyanide	0.47	U	N	AS

Color Before: green

Clarity Before: _____

Texture: mediumColor After: pale yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLTAPLT11RICE

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Matrix (soil/water): TISSUELab Sample ID: 535842Level (low/med): LOWDate Received: 07/25/03% Solids: 100.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	56.4			P
7440-36-0	Antimony	0.43	U		P
7440-38-2	Arsenic	0.44	U		P
7440-39-3	Barium	23.1			P
7440-41-7	Beryllium	0.018	U		P
7440-43-9	Cadmium	0.054	U		P
7440-70-2	Calcium	5150			P
7440-47-3	Chromium	0.15	B		P
7440-48-4	Cobalt	0.18	U		P
7440-50-8	Copper	1.3	B		P
7439-89-6	Iron	65.3			P
7439-92-1	Lead	0.29			P
7439-95-4	Magnesium	827			P
7439-96-5	Manganese	23.1			P
7439-97-6	Mercury	0.023	B		CV
7440-02-0	Nickel	0.19	U		P
7440-09-7	Potassium	5570		E	P
7782-49-2	Selenium	0.31	U		P
7440-22-4	Silver	0.20	U		P
7440-23-5	Sodium	54.5	B		P
7440-28-0	Thallium	0.52	U		P
7440-62-2	Vanadium	0.18	U		P
7440-66-6	Zinc	8.6			P
57-12-5	Cyanide	0.50	U	N	AS

Color Before: green

Clarity Before: _____

Texture: mediumColor After: pale yellowClarity After: clear

Artifacts: _____

Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IDOLWPPLT09RICE

Lab Name: STL BURLINGTON Contract: 23046

Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001

Matrix (soil/water): TISSUE Lab Sample ID: 535841

Level (low/med): LOW Date Received: 07/25/03

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	74.0			P
7440-36-0	Antimony	0.47	U		P
7440-38-2	Arsenic	0.48	U		P
7440-39-3	Barium	2.6	B		P
7440-41-7	Beryllium	0.020	U		P
7440-43-9	Cadmium	0.060	U		P
7440-70-2	Calcium	5950			P
7440-47-3	Chromium	0.35	B		P
7440-48-4	Cobalt	0.20	U		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	201			P
7439-92-1	Lead	0.88			P
7439-95-4	Magnesium	1680			P
7439-96-5	Manganese	321			P
7439-97-6	Mercury	0.016	U		CV
7440-02-0	Nickel	0.26	B		P
7440-09-7	Potassium	4390		E	P
7782-49-2	Selenium	0.46	B		P
7440-22-4	Silver	0.22	U		P
7440-23-5	Sodium	85.5	B		P
7440-28-0	Thallium	0.57	U		P
7440-62-2	Vanadium	0.20	U		P
7440-66-6	Zinc	11.0			P
57-12-5	Cyanide	0.50	U	N	AS

Color Before: green Clarity Before: _____ Texture: mediumColor After: pale yellow Clarity After: clear Artifacts: _____

Comments: _____

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide	120.0	127.66	106.4	150.0	149.12	99.4	152.71	101.8	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Cyanide				150.0	152.68	101.8	155.26	103.5	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	26000.0	26330.00	101.3	30200.0	30240.00	100.1	30060.00	99.5	P
Antimony	250.0	249.70	99.9	300.0	302.70	100.9	299.30	99.8	P
Arsenic	250.0	246.30	98.5	100.0	99.94	99.9	99.63	99.6	P
Barium	500.0	493.90	98.8	200.0	200.20	100.1	199.10	99.6	P
Beryllium	500.0	502.70	100.5	100.0	99.53	99.5	99.21	99.2	P
Cadmium	500.0	491.60	98.3	100.0	98.98	99.0	97.96	98.0	P
Calcium	25000.0	25550.00	102.2	30200.0	30360.00	100.5	30140.00	99.8	P
Chromium	500.0	499.10	99.8	200.0	198.20	99.1	197.40	98.7	P
Cobalt	500.0	492.40	98.5	200.0	199.50	99.8	197.50	98.8	P
Copper	500.0	502.10	100.4	200.0	203.40	101.7	201.60	100.8	P
Iron	25500.0	26450.00	103.7	30200.0	30290.00	100.3	30090.00	99.6	P
Lead	1000.0	986.90	98.7	400.0	391.20	97.8	388.30	97.1	P
Magnesium	25000.0	25510.00	102.0	30200.0	30050.00	99.5	29790.00	98.6	P
Manganese	500.0	493.00	98.6	200.0	199.10	99.6	198.30	99.2	P
Nickel	500.0	496.40	99.3	200.0	197.70	98.8	196.40	98.2	P
Potassium	25000.0	26240.00	105.0	30200.0	31290.00	103.6	31160.00	103.2	P
Selenium	250.0	243.30	97.3	100.0	97.12	97.1	95.85	95.8	P
Silver	500.0	499.20	99.8	100.0	100.80	100.8	101.30	101.3	P
Sodium	25000.0	25040.00	100.2	30200.0	29470.00	97.6	29330.00	97.1	P
Thallium	250.0	234.10	93.6	100.0	92.12	92.1	92.15	92.2	P
Vanadium	500.0	496.00	99.2	200.0	199.30	99.6	198.50	99.2	P
Zinc	500.0	502.00	100.4	200.0	203.50	101.8	201.90	101.0	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				30200.0	29940.00	99.1	30360.00	100.5	P
Antimony				300.0	297.40	99.1	300.10	100.0	P
Arsenic				100.0	99.10	99.1	99.43	99.4	P
Barium				200.0	198.10	99.0	199.60	99.8	P
Beryllium				100.0	98.96	99.0	99.21	99.2	P
Cadmium				100.0	97.94	97.9	98.17	98.2	P
Calcium				30200.0	29880.00	98.9	30200.00	100.0	P
Chromium				200.0	196.30	98.2	197.10	98.6	P
Cobalt				200.0	197.10	98.6	197.40	98.7	P
Copper				200.0	201.30	100.6	203.00	101.5	P
Iron				30200.0	29930.00	99.1	30090.00	99.6	P
Lead				400.0	388.30	97.1	388.40	97.1	P
Magnesium				30200.0	29690.00	98.3	29840.00	98.8	P
Manganese				200.0	197.20	98.6	198.60	99.3	P
Nickel				200.0	195.80	97.9	196.80	98.4	P
Potassium				30200.0	30990.00	102.6	31270.00	103.5	P
Selenium				100.0	100.10	100.1	98.70	98.7	P
Silver				100.0	100.30	100.3	100.70	100.7	P
Sodium				30200.0	29110.00	96.4	29410.00	97.4	P
Thallium				100.0	94.14	94.1	93.09	93.1	P
Vanadium				200.0	197.10	98.6	197.70	98.8	P
Zinc				200.0	201.00	100.5	201.10	100.6	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	3.0	2.73	91.0	5.0	4.93	98.6	4.77	95.4	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Initial Calibration Source: Inorganic Ventures/FisherContinuing Calibration Source: SPEX/Fisher

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	4.87	97.4	4.85	97.0	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	True	Found	%R	CRDL Standard for ICP				
				Initial		Final		
				True	Found	%R	Found	%R
Aluminum				400.0	576.50	144.1	600.80	150.2
Antimony				120.0	121.80	101.5	123.20	102.7
Arsenic				20.0	21.96	109.8	19.91	99.6
Barium				400.0	394.10	98.5	397.30	99.3
Beryllium				10.0	10.29	102.9	10.39	103.9
Cadmium				10.0	10.42	104.2	10.37	103.7
Calcium				10000.0	10510.00	105.1	10610.00	106.1
Chromium				20.0	25.05	125.2	26.05	130.2
Cobalt				100.0	97.75	97.8	98.17	98.2
Copper				50.0	51.21	102.4	51.85	103.7
Iron				200.0	319.40	159.7	342.30	171.2
Lead				6.0	6.39	106.5	5.92	98.7
Magnesium				10000.0	10280.00	102.8	10360.00	103.6
Manganese				30.0	30.81	102.7	31.15	103.8
Nickel				80.0	82.92	103.6	82.91	103.6
Potassium				10000.0	10900.00	109.0	11000.00	110.0
Selenium				10.0	10.67	106.7	10.07	100.7
Silver				20.0	21.05	105.2	20.59	103.0
Sodium				10000.0	10060.00	100.6	10200.00	102.0
Thallium				20.0	15.15	75.8	13.14	65.7
Vanadium				100.0	99.87	99.9	99.83	99.8
Zinc				40.0	41.51	103.8	41.85	104.6

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001AA CRDL Standard Source: Inorganic VenturesICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte				CRDL Standard for ICP				
	True	Found	%R	Initial True	Found	%R	Final Found	%R
Mercury	0.2	0.17	85.0					

Control Limits: no limits have been established by EPA at this time

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.500	U	AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Cyanide			10.0	U							AS

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Aluminum	23.6	U	23.6	U	23.6	U	23.6	U	2.360	U	P
Antimony	4.7	U	4.7	U	4.7	U	4.7	U	0.470	U	P
Arsenic	4.8	U	4.8	U	4.8	U	4.8	U	0.480	U	P
Barium	5.9	U	5.9	U	5.9	U	5.9	U	0.590	U	P
Beryllium	0.2	U	0.2	U	0.2	U	0.2	U	0.020	U	P
Cadmium	0.6	U	0.6	U	0.6	U	0.6	U	0.060	U	P
Calcium	182.1	U	182.1	U	182.1	U	182.1	U	18.210	U	P
Chromium	1.4	U	1.4	U	1.4	U	1.4	U	0.140	U	P
Cobalt	2.0	U	2.0	U	2.0	U	2.0	U	0.200	U	P
Copper	2.4	U	2.4	U	2.4	U	2.4	U	0.240	U	P
Iron	33.3	U	33.3	U	33.3	U	33.3	U	3.330	U	P
Lead	1.5	B	1.3	U	1.3	U	1.3	U	0.148	B	P
Magnesium	178.3	U	178.3	U	178.3	U	178.3	U	17.830	U	P
Manganese	0.7	U	0.7	U	0.7	U	0.7	U	0.070	U	P
Nickel	2.1	U	2.1	U	2.1	U	2.1	U	-0.250	B	P
Potassium	393.0	U	393.0	U	393.0	U	393.0	U	39.300	U	P
Selenium	3.4	U	3.4	U	3.4	U	3.4	U	0.340	U	P
Silver	2.2	U	2.2	U	2.2	U	2.2	U	0.220	U	P
Sodium	472.7	U	472.7	U	472.7	U	472.7	U	83.850	B	P
Thallium	5.7	U	5.7	U	5.7	U	5.7	U	-0.865	B	P
Vanadium	2.0	U	2.0	U	2.0	U	2.0	U	0.200	U	P
Zinc	1.0	U	1.0	U	1.0	U	1.0	U	0.245	B	P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Aluminum			23.6	U							P
Antimony			4.7	U							P
Arsenic			4.8	U							P
Barium			5.9	U							P
Beryllium			0.2	U							P
Cadmium			0.6	U							P
Calcium			182.1	U							P
Chromium			1.4	U							P
Cobalt			2.0	U							P
Copper			2.4	U							P
Iron			33.3	U							P
Lead			1.3	U							P
Magnesium			178.3	U							P
Manganese			0.7	U							P
Nickel			2.1	U							P
Potassium			393.0	U							P
Selenium			3.4	U							P
Silver			2.2	U							P
Sodium			472.7	U							P
Thallium			5.7	U							P
Vanadium			2.0	U							P
Zinc			1.0	U							P

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	M
		1	2	3					
Mercury	0.1 U	0.1 U	0.1 U	0.1 U				0.017 U	CV

USEPA - CLP FORMS

3

BLANKS

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
			1	C	2	C	3	C			
Mercury			0.1	B							CV

USEPA - CLP FORMS

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001ICP ID Number: TJA ICAP 4 ICS Source: Inorganic VenturesConcentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	477680	499300	502500.0	105.2	502800	506000.0	105.9
Antimony	0	575	-4	599.9	104.3	-1	596.3	103.7
Arsenic	0	97	4	100.4	103.5	4	102.8	106.0
Barium	0	464	2	494.0	106.5	2	493.8	106.4
Beryllium	0	444	0	469.5	105.7	0	469.2	105.7
Cadmium	0	874	0	925.8	105.9	0	921.4	105.4
Calcium	500000	476380	488800	496200.0	104.2	486500	494500.0	103.8
Chromium	0	451	3	476.4	105.6	3	475.3	105.4
Cobalt	0	434	0	454.8	104.8	-1	452.9	104.4
Copper	0	482	4	511.9	106.2	4	513.2	106.5
Iron	200000	192500	198400	199100.0	103.4	197600	198300.0	103.0
Lead	0	41	-3	39.4	96.1	-2	41.1	100.2
Magnesium	500000	524140	530100	538500.0	102.7	526700	535600.0	102.2
Manganese	0	451	1	476.8	105.7	2	476.3	105.6
Nickel	0	876	0	925.9	105.7	0	919.9	105.0
Potassium	0	0	-86	-106.4		-100	-107.5	
Selenium	0	41	1	43.3	105.6	-2	42.0	102.4
Silver	0	198	1	210.8	106.5	0	211.9	107.0
Sodium	0	0	-77	-232.9		-61	-97.7	
Thallium	0	83	-10	84.0	101.2	-11	79.2	95.4
Vanadium	0	464	0	489.6	105.5	-1	488.5	105.3
Zinc	0	951	6	994.3	104.6	6	988.4	103.9

USEPA - CLP FORMS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLTAPLT10RICES

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Matrix (soil/water): TISSUE Level (low/med): LOW% Solids for Sample: 100.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	279.3397		66.6667		188.68	112.7		P
Antimony	75 - 125	48.1887		0.4476	U	47.17	102.2		P
Arsenic	75 - 125	3.6783		0.4571	U	3.77	97.6		P
Barium	75 - 125	272.6415		72.2762		188.68	106.2		P
Beryllium	75 - 125	4.7811		0.0190	U	4.72	101.3		P
Cadmium	75 - 125	4.7566		0.0571	U	4.72	100.8		P
Chromium	75 - 125	19.7170		0.1806	B	18.87	103.5		P
Cobalt	75 - 125	46.8302		0.1905	U	47.17	99.3		P
Copper	75 - 125	27.0755		1.8886	B	23.58	106.8		P
Iron	75 - 125	173.8680		68.1810		94.34	112.0		P
Lead	75 - 125	2.1840		0.4011		1.89	94.3		P
Manganese	75 - 125	96.7925		50.1143		47.17	99.0		P
Mercury	75 - 125	0.1459		0.0207	B	0.16	78.2		CV
Nickel	75 - 125	46.0000		0.2000	U	47.17	97.5		P
Selenium	75 - 125	1.2066		0.4809		0.94	77.2		P
Silver	75 - 125	4.8340		0.2095	U	4.72	102.4		P
Thallium	75 - 125	3.8991		0.5429	U	4.72	82.6		P
Vanadium	75 - 125	48.7830		0.1905	U	47.17	103.4		P
Zinc	75 - 125	60.5660		11.6857		47.17	103.6		P
Cyanide	75 - 125	3.4282		0.4717	U	5.00	68.6	N	AS

Comments:

USEPA - CLP FORMS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDOLTAPLT10RICEA

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS SDG No.: IDV001Matrix (soil/water): TISSUE Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		2824.00		700.00		2000.0	106.2		P
Antimony		512.40		4.70	U	500.0	102.5		P
Arsenic		31.40		4.80	U	40.0	78.5		P
Barium		2775.00		758.90		2000.0	100.8		P
Beryllium		50.91		0.20	U	50.0	101.8		P
Cadmium		50.56		0.60	U	50.0	101.1		P
Chromium		210.30		1.90	B	200.0	104.2		P
Cobalt		501.30		2.00	U	500.0	100.3		P
Copper		288.90		19.83	B	250.0	107.6		P
Iron		1745.00		715.90		1000.0	102.9		P
Lead		22.81		4.21		20.0	93.0		P
Manganese		1026.00		526.20		500.0	100.0		P
Nickel		488.80		2.10	U	500.0	97.8		P
Selenium		12.95		5.05		10.0	79.0		P
Silver		51.79		2.20	U	50.0	103.6		P
Thallium		45.09		5.70	U	50.0	90.2		P
Vanadium		521.60		2.00	U	500.0	104.3		P
Zinc		628.90		122.70		500.0	101.2		P
Cyanide		23.30		10.00	U	20.0	116.5		AS

Comments: _____

USEPA - CLP FORMS

6

DUPLICATES

SAMPLE NO.

IDOLTAPLT10RICED

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Matrix (soil/water): TISSUE Level (low/med): LOW% Solids for Sample: 100.0 % Solids for Duplicate: 100.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	19.0	66.6667		68.1238		2.2		P
Antimony		0.4476	U	0.4476	U			P
Arsenic		0.4571	U	0.4571	U			P
Barium	19.0	72.2762		78.8190		8.7		P
Beryllium		0.0190	U	0.0190	U			P
Cadmium		0.0571	U	0.0571	U			P
Calcium		7470.4771		8099.0479		8.1		P
Chromium		0.1806	B	0.1575	B	13.7		P
Cobalt		0.1905	U	0.1905	U			P
Copper		1.8886	B	2.1410	B	12.5		P
Iron		68.1810		70.9714		4.0		P
Lead	0.3	0.4011		0.3768		6.2		P
Magnesium	476.2	1098.0950		1106.6670		0.8		P
Manganese		50.1143		46.3333		7.8		P
Mercury		0.0207	B	0.0161	U	200.0		CV
Nickel		0.2000	U	0.2000	U			P
Potassium		5869.5239		6108.5718		4.0		P
Selenium		0.4809		0.3801	B	23.4		P
Silver		0.2095	U	0.2095	U			P
Sodium		65.7333	B	70.9524	B	7.6		P
Thallium		0.5429	U	0.5429	U			P
Vanadium		0.1905	U	0.1905	U			P
Zinc		11.6857		14.0095		18.1		P
Cyanide		0.4717	U	0.5000	U			AS

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Solid LCS Source: Environmental Express

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits	%R	
Cyanide				6.0	6.3	5.4	6.6	105.0

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Solid LCS Source: Environmental Express

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits	%R	
Aluminum				200.0	205.4	160.0 240.0	102.7	
Antimony				50.0	51.7	40.0 60.0	103.4	
Arsenic				24.0	24.1	19.2 28.8	100.4	
Barium				200.0	202.3	160.0 240.0	101.2	
Beryllium				5.0	5.1	4.0 6.0	102.0	
Cadmium				25.0	25.4	20.0 30.0	101.6	
Calcium				2000.0	2121.0	1600.0 2400.0	106.0	
Chromium				20.0	21.0	16.0 24.0	105.0	
Cobalt				50.0	50.4	40.0 60.0	100.8	
Copper				25.0	26.8	20.0 30.0	107.2	
Iron				100.0	110.7	80.0 120.0	110.7	
Lead				22.0	21.9	17.6 26.4	99.5	
Magnesium				2000.0	2042.0	1600.0 2400.0	102.1	
Manganese				50.0	51.5	40.0 60.0	103.0	
Nickel				50.0	50.4	40.0 60.0	100.8	
Potassium				2000.0	2065.0	1600.0 2400.0	103.2	
Selenium				21.0	20.4	16.8 25.2	97.1	
Silver				25.0	23.2	20.0 30.0	92.8	
Sodium				2000.0	2054.0	1600.0 2400.0	102.7	
Thallium				25.0	24.4	20.0 30.0	97.6	
Vanadium				50.0	52.0	40.0 60.0	104.0	
Zinc				50.0	51.5	40.0 60.0	103.0	

USEPA - CLP FORMS

7

LABORATORY CONTROL SAMPLE

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: SDG No.: IDV001Solid LCS Source: Environmental ExpressAqueous LCS Source:

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found C	Limits	%R	
Mercury				0.1	0.1	0.1	0.1	100.0

USEPA - CLP FORMS

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ICP SERIAL DILUTIONS

SAMPLE NO.

IDOLTAPLT10RICEL

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046SAS No.: _____ SDG No.: IDV001Matrix (soil/water): TISSUELevel (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)		Serial Dilution Result (S)		% Differ- ence	Q	M
Aluminum	700.00	C	642.50	B	8.2		P
Antimony	4.70	U	23.50	U			P
Arsenic	4.80	U	24.00	U			P
Barium	758.90		735.70	B	3.1		P
Beryllium	0.20	U	1.00	U			P
Cadmium	0.60	U	3.00	U			P
Calcium	78440.00		77150.00		1.6		P
Chromium	1.90	B	7.00	U	100.0		P
Cobalt	2.00	U	10.00	U			P
Copper	19.83	B	21.03	B	6.1		P
Iron	715.90		733.70		2.5		P
Lead	4.21		6.50	U	100.0		P
Magnesium	11530.00		11460.00	B	0.6		P
Manganese	526.20		523.60		0.5		P
Nickel	2.10	U	10.50	U			P
Potassium	61630.00		75120.00		21.9	E	P
Selenium	5.05		17.00	U	100.0		P
Silver	2.20	U	11.00	U			P
Sodium	690.20	B	2363.50	U	100.0		P
Thallium	5.70	U	28.50	U			P
Vanadium	2.00	U	10.00	U			P
Zinc	122.70		129.20		5.3		P

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001ICP ID Number: _____ Date: 07/01/03Flame AA ID Number: Lachat Cyanide

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	PQL (ug/L)	PQL (ug/L)	M
Cyanide			10	10.0	AS

Comments: _____

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046

SAS No.: _____

SDG No.: IDV001

ICP ID Number: _____

Date: 07/01/03Flame AA ID Number: Leeman Hydra AA

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	PQL (ug/L)	PQL (ug/L)	M
Mercury	253.70		0.2	0.10	CV

Comments: _____

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVT Case No.: 23046

SAS No.: _____

SDG No.: IDV001ICP ID Number: TJA ICAP 4Date: 07/01/03

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	PQL (ug/L)	PQL (ug/L)	M
Aluminum	308.215		200	23.6	P
Antimony	206.838		60	4.7	P
Arsenic	189.042		10	4.8	P
Barium	493.409		200	5.9	P
Beryllium	313.042		5	0.2	P
Cadmium	226.502		5	0.6	P
Calcium	317.933		5000	182.1	P
Chromium	267.716		10	1.4	P
Cobalt	228.616		50	2.0	P
Copper	324.754		25	2.4	P
Iron	271.441		100	33.3	P
Lead	220.353		3	1.3	P
Magnesium	279.078		5000	178.3	P
Manganese	257.610		15	0.7	P
Nickel	231.604		40	2.1	P
Potassium	766.491		5000	393.0	P
Selenium	196.026		5	3.4	P
Silver	328.068		10	2.2	P
Sodium	330.232		5000	472.7	P
Thallium	190.864		10	5.7	P
Vanadium	292.402		50	2.0	P
Zinc	213.856		20	1.0	P

Comments: _____

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDY001ICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ba
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	-0.0000600	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0008950	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000330	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0004320
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0006300	0.0000000	0.0000090	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000200	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	-0.0000220	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0000200	0.0000000	-0.0000900	0.0000000	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000490	0.0000000	0.0000000
Zinc	213.86	0.0000250	0.0000000	0.0000630	0.0000000	0.0000000

Comments: _____

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDY001ICP ID Number: TJA ICAP 4Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	Mn	Mo
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0072400
Antimony	206.84	0.0000000	0.0111600	0.0000000	0.0000000	-0.0024800
Arsenic	189.04	0.0000000	0.0004700	0.0000000	0.0000000	0.0013380
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0001150	0.0000000	0.0000000	0.0000000	0.0001350
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	-0.0016380
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.44	0.1059800	0.0000000	0.0000000	0.0000000	0.0036200
Lead	220.35	-0.0022600	-0.0001190	0.0000000	0.0000000	-0.0007540
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0004300	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	-0.0038600	0.0000000	0.0000000	-0.0042750
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	-0.0007920
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0032700	0.0002540	0.0000000	-0.008140	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	-0.0160000
Zinc	213.86	0.0000000	0.0000000	0.0003300	0.0000000	0.0000000

Comments: _____

11A

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001ICP ID Number: TJA ICAP 4 Date: 06/30/03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Ni	Sb	Sn	V	Zn
Aluminum	308.22	0.0000000	0.0000000	0.1440400	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0006280	0.0000000
Boron	249.68	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	-0.000192	0.0000000
Iron	271.44	0.0000000	0.0000000	0.0000000	0.0237000	0.0000000
Lead	220.35	0.0001240	-0.0002280	0.0000000	0.0005020	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0001660	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	-0.1212200	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.1177000
Thallium	190.86	0.0000000	0.0000000	0.0000000	0.0025400	0.0000000
Tin	189.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.86	0.0052400	0.0000000	0.0000000	0.0000000	0.0000000

Comments: _____

ICP LINEAR RANGES (QUARTERLY)

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001ICP ID Number: TJA ICAP 4Date: 07/01/03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	10.00	1000000.0	P
Antimony	10.00	100000.0	P
Arsenic	10.00	5000.0	P
Barium	10.00	10000.0	P
Beryllium	10.00	5000.0	P
Cadmium	10.00	5000.0	P
Calcium	10.00	600000.0	P
Chromium	10.00	100000.0	P
Cobalt	10.00	100000.0	P
Copper	10.00	10000.0	P
Iron	10.00	1000000.0	P
Lead	10.00	10000.0	P
Magnesium	10.00	500000.0	P
Manganese	10.00	10000.0	P
Nickel	10.00	10000.0	P
Potassium	10.00	100000.0	P
Selenium	10.00	5000.0	P
Silver	10.00	2000.0	P
Sodium	10.00	100000.0	P
Thallium	10.00	5000.0	P
Vanadium	10.00	100000.0	P
Zinc	10.00	5000.0	P

Comments: _____

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Method: AS

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
EBLK	08/04/03	1.01	50.0
ICV	08/04/03	50.0	50.0
IDOLBGREPLT08RICE	08/04/03	1.01	50.0
IDOLTAPLT10100RICE	08/04/03	1.00	50.0
IDOLTAPLT10RICE	08/04/03	1.06	50.0
IDOLTAPLT10RICED	08/04/03	1.00	50.0
IDOLTAPLT10RICES	08/04/03	1.00	50.0
IDOLTAPLT11RICE	08/04/03	1.00	50.0
IDOLWPPLT09RICE	08/04/03	1.01	50.0
LCS0804B	08/04/03	1.00	50.0
PBS0804B	08/04/03	1.00	50.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Method: CV

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
EBLK	08/13/03	0.63	100.0
IDOLBGREPLT08RICE	08/13/03	0.62	100.0
IDOLTAPLT10100RICE	08/13/03	0.63	100.0
IDOLTAPLT10RICE	08/13/03	0.60	100.0
IDOLTAPLT10RICED	08/13/03	0.62	100.0
IDOLTAPLT10RICES	08/13/03	0.64	100.0
IDOLTAPLT11RICE	08/13/03	0.67	100.0
IDOLWPPLT09RICE	08/13/03	0.63	100.0
LCSS0813B	08/13/03	1.00	100.0
PBS0813B	08/13/03	0.60	100.0

USEPA - CLP FORMS

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PREPARATION LOG

Lab Name: STL BURLINGTON Contract: 23046Lab Code: STLVT Case No.: 23046 SAS No.: _____ SDG No.: IDV001Method: P

EPA Sample No.	Preparation Date	Initial Volume mL	Volume (mL)
EBLK	08/20/03	1.00	100.0
IDOLBGREPLT08RICE	08/20/03	1.00	100.0
IDOLTAPLT10100RICE	08/20/03	1.06	100.0
IDOLTAPLT10RICE	08/20/03	1.05	100.0
IDOLTAPLT10RICED	08/20/03	1.05	100.0
IDOLTAPLT10RICES	08/20/03	1.06	100.0
IDOLTAPLT11RICE	08/20/03	1.10	100.0
IDOLWPPLT09RICE	08/20/03	1.00	100.0
LCSS0820D	08/20/03	1.00	100.0
PBS0820D	08/20/03	1.00	100.0

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Instrument ID Number: Lachat Cyanide QC8000Method: ASStart Date: 08/04/03End Date: 08/04/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K I	S E	A G	N A	T L	V N
S0	1.00	1538	..																						X
S10	1.00	1539																							X
S30	1.00	1540																							X
S50	1.00	1541																							X
S100	1.00	1542																							X
S200	1.00	1543																							X
S300	1.00	1544																							X
ICV	1.00	1546																							X
ICB	1.00	1547																							X
LRS	1.00	1548																							X
LRS	1.00	1549																							X
CCV	1.00	1550																							X
CCB	1.00	1551																							X
PBS0804B	1.00	1552																							X
LCS0804B	1.00	1553																							X
ZZZZZZ	1.00	1554																							
IDOLBGREPLT08RICE	1.00	1555																							X
IDOLTAPLT10RICE	1.00	1556																							X
IDOLTAPLT10RICED	1.00	1557																							X
IDOLTAPLT10RICES	1.00	1558																							X
IDOLTAPLT10100RICE	1.00	1559																							X
IDOLWPPLT09RICE	1.00	1600																							X
IDOLTAPLT11RICE	1.00	1601																							X
CCV	1.00	1602																							X
CCB	1.00	1602																							X
EBLK	1.00	1603																							X
ZZZZZZ	1.00	1604																							
ZZZZZZ	1.00	1605																							
ZZZZZZ	1.00	1606																							
ZZZZZZ	1.00	1607																							
ZZZZZZ	1.00	1608																							
ZZZZZZ	1.00	1609																							
ZZZZZZ	1.00	1610																							
ZZZZZZ	1.00	1611																							
ZZZZZZ	1.00	1612																							
CCV	1.00	1613																							X
CCB	1.00	1614																							X
ZZZZZZ	1.00	1615																							

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Instrument ID Number: Lachat Cyanide QC8000Method: ASStart Date: 08/04/03End Date: 08/04/03

EPA Sample No.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
ZZZZZZ	1.00	1616																											
ZZZZZZ	1.00	1617																											
IDOLTAPLT1ORICEA	1.00	1618																									X		
ZZZZZZ	1.00	1619																											
CCV	1.00	1620																									X		
CCB	1.00	1621																									X		

USEPA - CLP FORMS

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ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Instrument ID Number: TJA ICAP 4Method: PStart Date: 09/12/03End Date: 09/13/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A G	N A	T L	V N
S0	1.00	2145		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S	1.00	2149		X						X				X	X					X			X		
S	1.00	2153			X	X								X						X			X		
S	1.00	2157					X	X	X		X	X	X				X	X			X			X	X
LRS	1.00	2202		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LRS	1.00	2207		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LRS	1.00	2212		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICV	1.00	2216		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICB	1.00	2221		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSA	1.00	2226		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSAB	1.00	2231		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRI	1.00	2235		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV	1.00	2240		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB	1.00	2245		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PBS0820D	1.00	2250		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LCSS0820D	1.00	2254		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLBGREPLT08RICE	1.00	2259		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLTAPLT10RICE	1.00	2304		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLTAPLT10RICE L	5.00	2308		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLTAPLT10RICE A	1.00	2313		X	X	X	X	X	X		X	X	X	X	X		X		X	X		X	X	X	X
IDOLTAPLT10RICE D	1.00	2318		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLTAPLT10RICE S	1.00	2322		X	X	X	X	X	X		X	X	X	X	X		X		X	X		X	X	X	X
IDOLTAPLT10100RICE	1.00	2327		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLWPPLT09RICE	1.00	2332		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV	1.00	2336		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB	1.00	2341		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDOLTAPLT11RICE	1.00	2346		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EBLK	1.00	2351		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1.00	2355																							
ZZZZZZ	1.00	0000																							
ZZZZZZ	5.00	0005																							
ZZZZZZ	1.00	0009																							
ZZZZZZ	1.00	0014																							
ZZZZZZ	1.00	0019																							
ZZZZZZ	10.00	0023																							
ZZZZZZ	50.00	0028																							
CCV	1.00	0033		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB	1.00	0038		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

USEPA - CLP FORMS

14

ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Instrument ID Number: TJA ICAP 4Method: PStart Date: 09/12/03End Date: 09/13/03

EPA Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N	C N					
ZZZZZZ	10.00	0042																													
ZZZZZZ	10.00	0047																													
ZZZZZZ	10.00	0052																													
ZZZZZZ	10.00	0056																													
ZZZZZZ	10.00	0101																													
ICSA	1.00	0106		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X					
ICSAB	1.00	0110		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X					
CRI	1.00	0115		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X					
CCV	1.00	0120		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X					
CCB	1.00	0125		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X					

USEPA - CLP FORMS

14

ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/14/03End Date: 08/14/03

EPA Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N	C N	
S0	1.00	1654															X										
S0.2	1.00	1656															X										
S0.5	1.00	1658															X										
S1	1.00	1700															X										
S5	1.00	1701															X										
S10	1.00	1703															X										
ICV	1.00	1705															X										
ICB	1.00	1707															X										
CRA	1.00	1709															X										
CCV	1.00	1710															X										
CCB	1.00	1712															X										
ZZZZZZ	2.00	1714																									
ZZZZZZ	1.00	1716																									
ZZZZZZ	5.00	1718																									
ZZZZZZ	1.00	1719																									
PBS0813B	1.00	1721															X										
LCSS0813B	1.00	1723															X										
ZZZZZZ	1.00	1725																									
ZZZZZZ	1.00	1727																									
ZZZZZZ	1.00	1728																									
CCV	1.00	1730															X										
CCB	1.00	1732															X										
ZZZZZZ	1.00	1734																									
ZZZZZZ	1.00	1736																									
ZZZZZZ	1.00	1737																									
ZZZZZZ	1.00	1739																									
ZZZZZZ	1.00	1741																									
ZZZZZZ	1.00	1743																									
IDOLBGREPLT08RICE	1.00	1745															X										
IDOLTAPLT10RICE	1.00	1746															X										
IDOLTAPLT10RICED	1.00	1749															X										
CCV	1.00	1751															X										
CCB	1.00	1753															X										
IDOLTAPLT10RICES	1.00	1755															X										
IDOLTAPLT10100RICE	1.00	1757															X										
IDOLWPPLT09RICE	1.00	1759															X										
IDOLTAPLT11RICE	1.00	1801															X										
EBLK	1.00	1802															X										

USEPA - CLP FORMS

14

ANALYSIS RUN LOG

Lab Name: STL BURLINGTONContract: 23046Lab Code: STLVTCase No.: 23046

SAS No.: _____

SDG No.: IDV001Instrument ID Number: Leeman Hydra AAMethod: CVStart Date: 08/14/03End Date: 08/14/03

EPA Sample No.	D/F	Time	% R	Analytes																					
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N
ZZZZZZ	1.00	1804																							
ZZZZZZ	1.00	1806																							
ZZZZZZ	1.00	1808																							
ZZZZZZ	1.00	1810																							
CCV	1.00	1811																X							
CCB	1.00	1813																X							

Table 1: Modified ABA Results for STL Burlington Samples Batch 4 - Received July 31, 2003

Sample	Paste pH	Total Sulphur (Wt.%)	Sulphate Sulphur (Wt.%)	Sulphide Sulphur* (Wt.%)	Maximum Potential Acidity** (Kg CaCO ₃ /Tonne)	Neutralization Potential (Kg CaCO ₃ /Tonne)	Net Neutralization Potential (Kg CaCO ₃ /Tonne)	Fizz Rating
BLAC-PD-SSS-10-0.4	4.5	1.13	0.18	0.95	29.7	-14.5	-44.2	none
BLAC-WP-SUS-12-1.0	4.5	0.04	0.04	0.00	0.0	-2.3	-2.3	none
BLAC-WP-SUS-13-1.5	4.9	0.03	0.01	0.02	0.6	-0.8	-1.4	none
BLUE-AD-SSS-19-0.5	3.8	0.7	0.49	0.21	6.6	-15.8	-22.4	none
BLUE-TA-SSS-27-0.5	6.2	< .02	<0.01	< .02	<0.6	-2.5	-2.5	none
BLUE-TA-SUS-32-1.5	6.4	< .02	<0.01	< .02	<0.6	4.3	4.3	none
BLUE-TA-SUS-33-2.0	6.4	< .02	<0.01	< .02	<0.6	3.3	3.3	none
BLUE-WP-SUS-20-2.5	4.0	0.41	0.33	0.08	2.5	-2.3	-4.8	none
BLUE-WP-SUS-21-1.5	3.7	0.26	0.18	0.08	2.5	-3.0	-5.5	none
BLUE-WP-SUS-22-1.5	3.4	0.26	0.21	0.05	1.6	-3.3	-4.9	none
BLUE-WP-SUS-29-1.0	4.6	0.04	0.02	0.02	0.6	-2.3	-2.9	none
CHAM-ML-SSS-25-100	3.4	0.98	0.44	0.54	16.9	-3.3	-20.2	none
CLEA-BG-SSS-25-0.5	5.8	< .02	<0.01	< .02	<0.6	-2.8	-2.8	none
CLEA-BG-SSS-25-0.5 Rep.	6.2	< .02	<0.01	< .02	<0.6	-3.0	-3.0	none
CLEA-BG-SSS-26-0.5	6.1	< .02	<0.01	< .02	<0.6	-1.3	-1.3	none
IDOL-BK-SSS-08-0.5	6.1	0.06	0.05	0.01	0.3	0.8	0.5	none
IDOL-BK-SSS-08-0.5 Rep.	6.1	0.08	0.06	0.02	0.6	0.0	-0.6	none
IDOL-WP-SSS-03-0.5	4.4	1.7	1.24	0.46	14.4	-12.0	-26.4	none
IDOL-WP-SUS-03-3.5	3.4	2.11	1.83	0.28	8.7	2.3	-6.4	none
IDOL-WP-SUS-18-5.5	3.7	0.64	0.50	0.14	4.4	-7.0	-11.4	none
IDOL-WP-SUS-18-100	3.5	0.72	0.60	0.12	3.8	-2.5	-6.3	none

*Based on difference between total sulphur and sulphate-sulphur

**Based on sulphide-sulphur

Table 2a: QA/QC for NP Determination (Modified ABA Method)

Sample	Neutralisation Potential (kgCaCO ₃ /Tonne)	Neutralisation Potential (kgCaCO ₃ /Tonne)
BLUE-WP-SUS-22-1.5	-3.3	-3.3
CHAM-ML-SSS-25-100	-3.3	-3.5
NBM-1 Reference (NP = 42)	39.5	-

Table 2b: QA/QC for Sulphur Speciation

Sample	Sulphur (Wt.%)	Sulphur (Wt.%)
<i>Duplicates - total sulphur</i>		
BLUE-WP-SUS-22-1.5	0.26	0.25
IDOL-WP-SUS-18-100	0.72	0.73
Std. CSB (5.3%)	5.31	-
BCRI Std. (0.11%)	0.11	-
<i>Duplicates - sulphate sulphur</i>		
BLUE-WP-SUS-29-1.0	0.02	0.03
IDOL-WP-SSS-03-0.5	1.24	1.23
BCRI 0.23% SO ₄ -S Ref.	0.24	-

Appendix H

Waste Pile Volumes

SURVEY INFORMATION

A site survey was performed at the Idol City Mine site by Anderson Perry & Associates, Inc., of La Grande, Oregon. All Site Inspection sample locations were surveyed, and a topographic map of the site was prepared. Copies of the site survey drawings (Sheets 1, 2, and 3) are included herein.

WASTE PILE VOLUMES

Waste pile calculations were performed by Anderson Perry. The calculations were made using Land Development Desktop (LDD) software and the prismoidal cross-sectional method, and were verified by using the grid and surface composite methods. The totals obtained by all three methods agree within 1%.

Volumes were calculated for 15 separate waste piles at the site. The individual pile volumes are summarized below and the waste pile designations are shown on Anderson Perry Sheets 1 and 2 (following). The total estimated waste pile volume for the piles identified herein is approximately 2,000 cubic yards.

Waste Pile Designation	Method		
	Grid	Composite	Prismoidal
1	92	92	93
2	2	2	2
3	27	27	27
4	132	132	132
5	447	448	448
6	120	122	122
7	26	27	27
8	2	2	2
9	19	19	19
10	813	814	814
11	41	40	41
12	13	13	13
13&14	114	114	114
15	113	113	113
TOTALS (in cubic yards)	1,961	1,965	1,967

MINE RECLAMATION SURVEY

IDOL CITY MINE

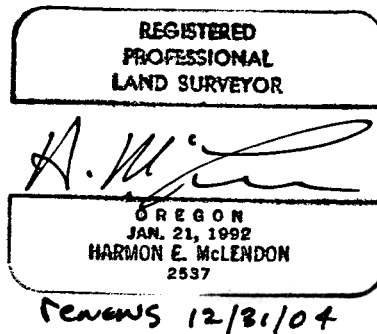
HARNEY COUNTY, OREGON

for

**EA ENGINEERING, SCIENCE,
AND TECHNOLOGY**

SURVEY DATE

July, August 2003



Anderson Perry & Associates, Inc.

**Civil Engineers
and
Land Surveyors**

**P.O. Box 1107, La Grande, Oregon
P.O. Box 1687, Walla Walla, Washington
2101 Main St., Baker City, Oregon**

December 15, 2003
Job No. 834-31

EA Engineering, Science & Technology
Attn: Cathy Bohlke
120011 Bellevue-Redmond Road, Suite 200
Bellevue, Washington 98005

Re: Idol City Mine Site - Final Survey Report

Dear Cathy:

This submittal completes the survey report for the above referenced project. Inside you will find final drawings, quantity calculations, a complete survey point listing, and a CD-ROM containing all project data in an ACAD2000-Land Development Desktop (LDD) format.

Survey control for this project was obtained by static GPS observations from the National Geodetic Control Station "BNO D," PID Number AA7995, located at the Burns Municipal Airport in Burns, Oregon. Dual frequency Topcon, Hiper, and Legacy receivers were employed to collect the data and it was processed using Trimble Geomatics Office software. Coordinates are reported in Oregon State Plane coordinates, South Zone, NAD83 (1998), and the vertical datum is NAVD88.

Topographic information was collected using a Lieca TC1100 total station with sufficient precision to develop a digital terrain model capable of producing a two-foot contour interval base map for quantity calculations.

Quantity calculations were performed using the prismoidal cross-sectional method and were independently verified using both the grid and surface composite methods within the LDD software. For the purposes of this project, it was assumed that the existing ground profile under the waste piles was a perfectly flat plane, recognizing that this assumption would produce errors in the final quantity calculations.

I hope you find this submittal to your satisfaction. If you have any questions concerning this material, please contact me directly. It has been a pleasure working with you and I look forward to other projects in the near future.

Very truly yours,

ANDERSON-PERRY & ASSOCIATES, INC.

By


Beau McLendon, Oregon PLS 2537

BM/cd
G:\Clients\EA\EA-Final Submittal.doc

CONSULTING ENGINEERING • SURVEYING • MATERIALS TESTING

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☐ BAKER CITY, OR 97814-2621
BASCHÉ-SAGE PLACE
2101 MAIN, Suite 207
(541) 523-5211
FAX: (541) 523-9275

Drawing Name: plan
 Project Name: IDOL
 Project Path: Q:\EA\IDOL\
 Username: wrood

Number	Northing	Easting	Elevation	Raw Desc	Full Desc
1005	769965.7111	5344907.4614	5858.4	PLT-08	PLT-08
1014	769938.4615	5344962.8513	5836.6	ST-07 FLAG	ST-07 FLAG
1062	770035.4131	5344919.8877	5845.1	AD-12 FLAG	AD-12 FLAG
1068	770015.5398	5344960.8278	5842.8	WP-18 FLAG	WP-18 FLAG
1114	770423.5390	5345144.1764	5783.3	WP-21 FLAG	WP-21 FLAG
1161	771279.1377	5345023.5427	5720.1	WP-15 FLAG	WP-15 FLAG WP-17
1192	771880.0421	5344928.4378	5680.2	TA-23 FLAG	TA-23 FLAG
1221	771891.7829	5344971.8607	5663.7	PD-13 FLAG	PD-13 FLAG
1229	772737.0230	5345153.3774	5639.6	TA-20 FLAG	TA-20 FLAG
1235	772691.6639	5345179.8559	5629.6	TA-22 FLAG	TA-22 FLAG
1454	773245.8769	5345497.8015	5597.6	TA-10 FLAG	TA-10 FLAG
1455	773242.6801	5345499.6262	5598.4	TA-10 PLT-10FLAG	TA-10 PLT-10
1484	773419.4845	5345577.0475	5599.6	WP-03 FLAG	WP-03 FLAG
1485	773421.1537	5345594.1987	5601.0	WP-09 FLAG	WP-09 FLAG
1486	773403.7130	5345607.6242	5600.8	WP-04 FLAG	WP-04 FLAG
1562	773451.0938	5345579.6825	5587.5	TA-09 FLAG	TA-09 FLAG TA-19
1589	773516.2440	5345567.5893	5597.3	WP-01 FLAG	WP-01 FLAG
1794	773544.5887	5345642.8633	5581.9	ST-05 FLAG	ST-05 FLAG
1830	773589.2448	5345626.4144	5579.9	PD-14 FLAG	PD-14 FLAG
1855	773558.9080	5345670.3218	5587.6	WP-02 FLAG	WP-02 FLAG
1958	774023.2732	5345594.6798	5556.7	STO-06 FLAG	STO-06 FLAG
1959	774023.1227	5345594.9707	5556.7	TA-11 FLAG	TA-11 FLAG

WASTEPILE VOLUMES.TXT

page 1

Project: IDOL

Wed November 12 09:38:34 2003

Site Volume Table: Unadjusted					
	Cut	Fill		Net	Method
	yards	yards		yards	
=====					
Site: WP1					
Stratum:	wp1	mine	WP1		
			92	0	92 (C) Grid
			93	0	93 (C) Composite
			93	0	93 (C) Prismoidal
Site: WP2					
Stratum	wp2	mine	WP2		
			2	0	2 (C) Grid
			2	0	2 (C) Composite
			2	0	2 (C) Prismoidal
Site: WP3					
Stratum:	wp3	mine	WP3		
			27	0	27 (C) Grid
			27	0	27 (C) Composite
			27	0	27 (C) Prismoidal
Site: WP4					
Stratum	wp4	mine	WP4		
			132	0	132 (C) Grid
			133	0	132 (C) Composite
			133	0	132 (C) Prismoidal
Site: WP5					
Stratum	wp5	mine	WP5		
			455	8	447 (C) Grid
			458	10	448 (C) Composite
			458	10	448 (C) Prismoidal
Site: WP6					
Stratum	wp6	mine	WP6		
			121	1	120 (C) Grid
			123	1	122 (C) Composite
			123	1	122 (C) Prismoidal
Site: WP7					
Stratum	wp7	mine	WP7		
			26	0	26 (C) Grid
			27	0	27 (C) Composite
			27	0	27 (C) Prismoidal
Site: WP8					
Stratum:	wp8	mine	wp8		
			2	0	2 (C) Grid
			2	0	2 (C) Composite
			2	0	2 (C) Prismoidal
Site: WP9					

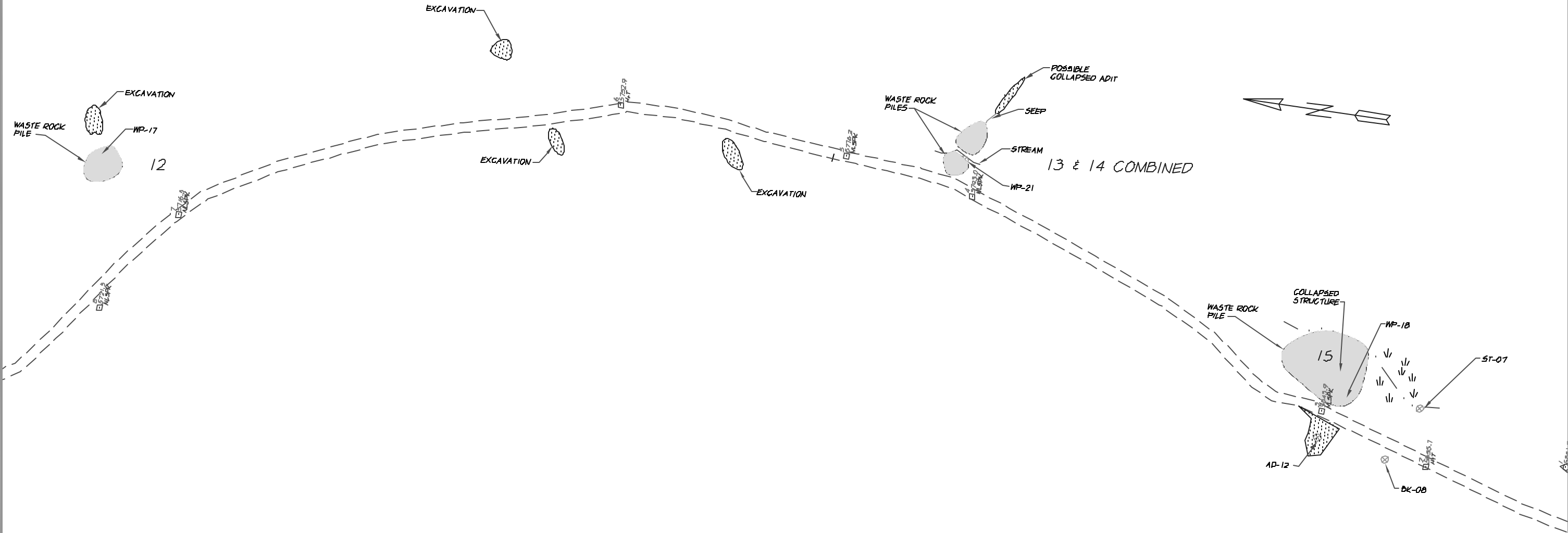
WASTEPILE VOLUMES.TXT

Stratum: wp9 mine WP9		
21	2	19 (C) Grid
21	2	19 (C) Composite
21	2	19 (C) Prismoidal
Site: WP10		
Stratum: wp10 mine WP10		
815	3	813 (C) Grid
817	3	814 (C) Composite
817	3	814 (C) Prismoidal
Site: WP11		
Stratum: wp11 WP11 wp11b		
41	0	41 (C) Composite
40	0	40 (C) Grid
41	0	41 (C) Prismoidal
Site: WP12		
Stratum: wp12 wp12b WP12		
3	17	13 (F) Grid
Stratum wp12 WP12 wp12b		
17	3	13 (C) Grid
17	3	13 (C) Composite
17	3	13 (C) Prismoidal
Site: WP15		
Stratum: wp15 WP15 wp15b		
187	74	113 (C) Grid
187	74	113 (C) Composite
187	74	113 (C) Prismoidal
Site: WP1314		
Stratum: wp1314 wp131 wp13b		
114	0	114 (C) Grid
114	0	114 (C) Composite
114	0	114 (C) Prismoidal



						<div><h1>PRELIMINARY</h1></div>	<div><p>anderson perry & associates, inc. <small>engineering • surveying • materials testing</small></p><p>LA GRANDE, OR. WALLA WALLA, WA. BAKER CITY, OR.</p></div>	<div><h2>EA ENGINEERING, SCIENCE, AND TECHNOLOGY</h2><p>MINE RECLAMATION</p></div>	<div>SHEET <h1>1</h1></div>
REVISION		BY	DATE	HORIZ. SCALE 1"=50'	VERT. SCALE				
DESIGNED BY B. McLENDON		XREFS: IDOL-TB.DWG		JOB NUMBER 834-31	DATE 2003				
DRAWN BY W. ROOD				ADAD FILE PLAN.DWG					
REVIEWED BY H. PERRY				COPYRIGHT 2003 BY ANDERSON-PERRY & ASSOC., INC.					
									IDOL CITY DETAIL SITE MAP

POINT TABLE - FLAGS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
1014	769930.46	5344962.85	5836.37	ST-07 FLAG
1062	770035.41	5344919.89	5845.06	AD-12 FLAG
1068	770015.54	5344960.83	5842.77	WP-18 FLAG
1114	778423.34	5345144.18	5783.28	WP-21 FLAG
1161	771279.14	5345029.54	5720.07	WP-17 FLAG
1192	771880.04	5344928.44	5680.20	TA-23 FLAG
1221	771891.78	5344971.86	5683.71	PD-13 FLAG
1229	772737.02	5345153.38	5639.62	TA-20 FLAG
1255	772891.66	5345179.86	5629.60	TA-22 FLAG
1454	773245.88	5345497.80	5597.63	TA-10 FLAG
1005	769965.71	5344907.46	5858.4	BK-08 FLAG
1484	773419.48	5345577.05	5599.83	WP-03 FLAG
1485	773421.15	5345594.20	5601.02	WP-09 FLAG
1486	773403.71	5345807.62	5600.81	WP-04 FLAG
1562	773451.09	5345579.68	5587.53	TA-19 FLAG
1569	773516.24	5345567.59	5597.27	WP-01 FLAG
1794	773544.59	5345642.86	5581.87	ST-05 FLAG
1830	773589.24	5345626.41	5579.94	PD-14 FLAG
1855	773558.41	5345870.32	5587.59	WP-02 FLAG
1958	774023.27	5345594.68	5556.73	ST-06 FLAG
1959	774023.12	5345594.97	5556.74	TA-11 FLAG



REVISION	BY	DATE	HORIZ. SCALE 1"=50'	VERT. SCALE
DESIGNED BY B. McLENDON	XREFS: IDOL-TB.DWG		JOB NUMBER 834-31	DATE 2003
DRAWN BY W. ROOD			ASAD FILE PLAN.DWG	
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MINE RECLAMATION

IDOL CITY DETAIL SITE MAP

SHEET

2

